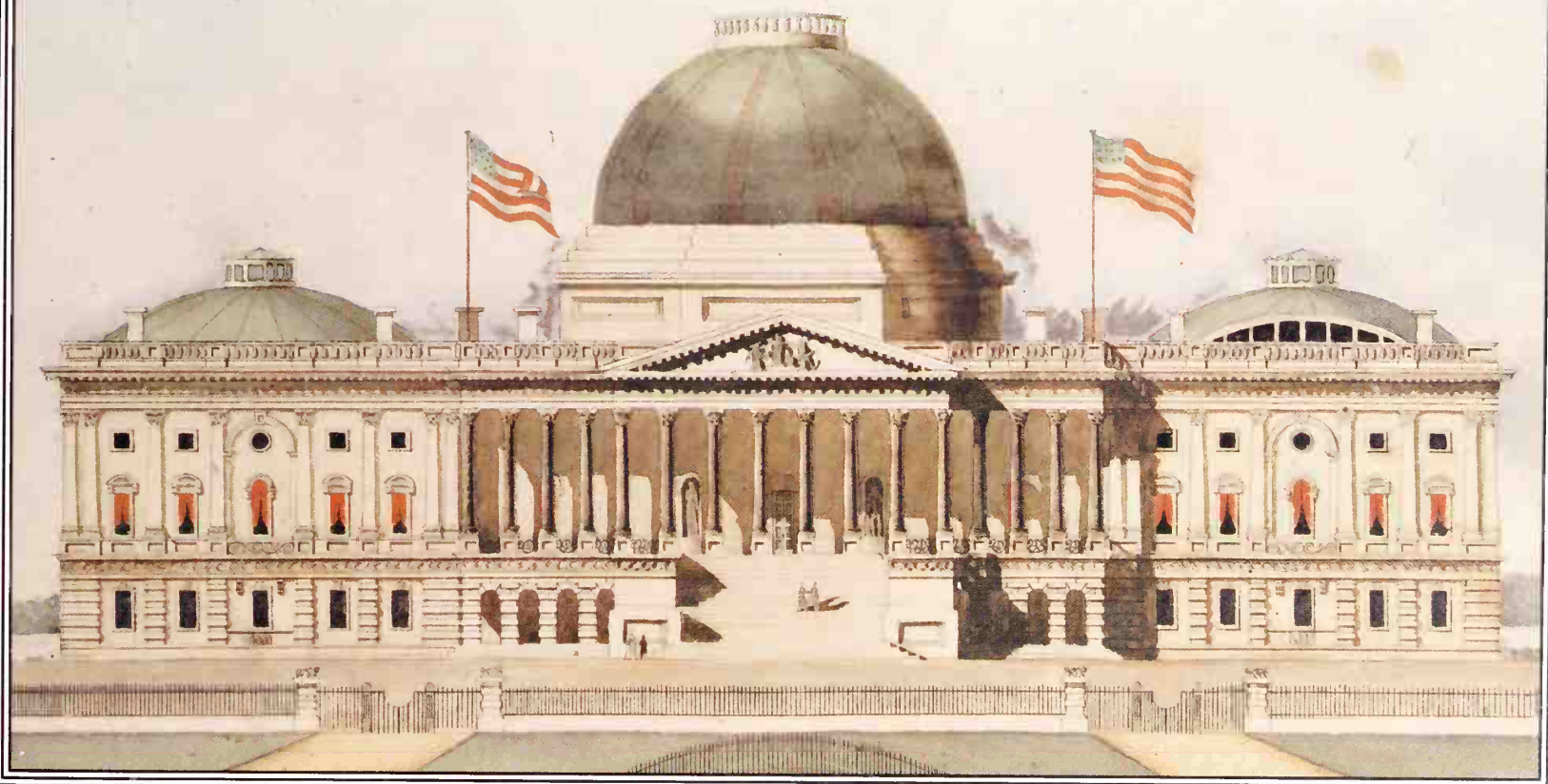
THE UNITED STATES CAPITOL: A BRIEF ARCHITECTURAL HISTORY



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THE UNITED STATES CAPITOL: A BRIEF ARCHITECTURAL HISTORY

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PREFACE

As the centerpiece of the legislative branch of government, the United States Capitol is the working symbol of the democratic promise. The Capitol is also an object of national pride, an imposing, inspiring building invigorated by the many people who work and visit here. It is also a building with a long and unusually dramatic construction history, which is the subject of this volume.

The Commission on the Bicentenary of the U.S. House of Representatives, the Commission on the Bicentennial of the United States Senate, and the Architect of the Capitol are pleased to present this illustrated work and hope it will encourage interest in the architecture and history of the Capitol.

Lindy (Mrs. Hale) Boggs

Lindy (Mrs. Hale) Boggs
Chairman
Commission on the Bicentenary
of the U.S. House of Representatives

Robert C. Byrd

Robert C. Byrd
Chairman
Commission on the Bicentennial
of the United States Senate

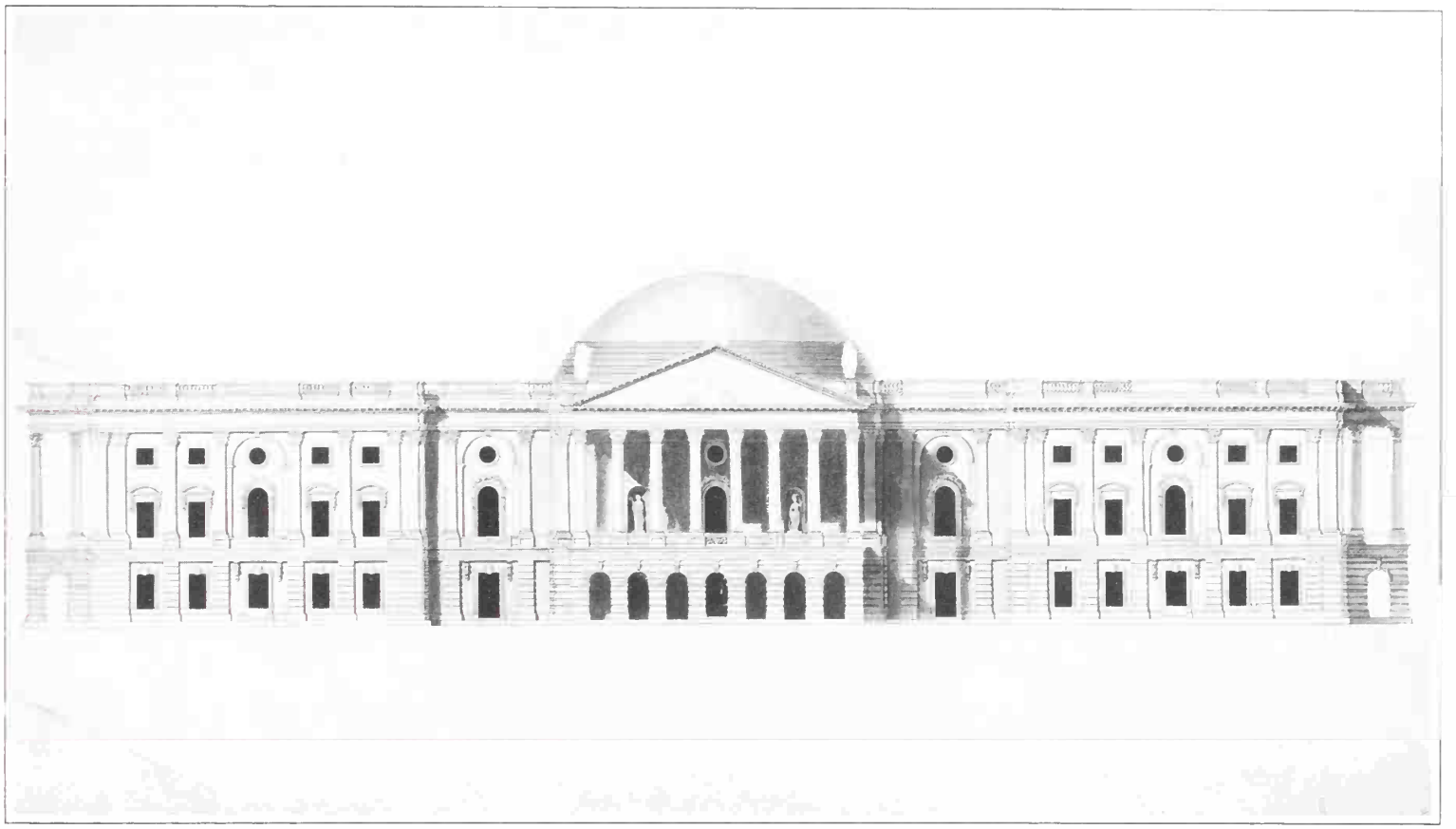
Perhaps the most widely recognized building in the world, the United States Capitol is synonymous with the American people and the American government. With the possible exception of Great Britain, no other government is so easily and readily identified by a single building. But unlike its younger counterpart in London, the Capitol of the United States is the result of a long and somewhat disjointed evolution that, it may be argued, aptly reflects our country's history. In the course of its fascinating and occasionally bewildering history, the Capitol has been built, rebuilt, restored, extended, domed and redomed. An understanding of its design and development often leads to an unexpected appreciation of the Capitol as an extraordinary architectural accomplishment.

A Slow Start

The genesis of the Capitol is found in the United States Constitution (1787). It provided that the federal government could settle in a permanent home in a district "not exceeding ten miles square." A rivalry between northern and southern interests resulted in a compromise location on the banks of the Potomac River. Under the provisions of the "Residence Act" passed by Congress in 1790, the government would take up its permanent home in the year 1800 and authorized President George Washington to appoint three commissioners to oversee the design of the city and the construction of necessary government buildings. The Commissioners, in turn, employed the talented French engineer Pierre Charles L'Enfant to develop a plan for the new city of Washington, to locate the federal buildings on suitable sites, and finally, to design the buildings and oversee construction of them. L'Enfant's plan, which was greatly influenced by the baroque gardens at Versailles, was an ambitious design with broad diagonal avenues superimposed on a street grid. Great public squares, plazas and parks were provided for the beauty of the city and for the health and enjoyment of its future citizens. For the Capitol L'Enfant selected an elevated position overlooking the public grounds of the Mall and plotted major avenues to converge on the site to give it unrivaled prominence and visibility. Known locally as Jenkins' Hill, the elevated site was, in L'Enfant's words, "a pedestal waiting for a monument."

A Design for the Capitol

Once L'Enfant had selected the location for the Capitol, he was expected to design the building and direct its construction. While experienced in architecture, this gifted but often obstreperous Frenchman refused to produce a plan, claiming he carried it "in his head." For this and other reasons L'Enfant was dismissed in 1792. The Commissioners had to look elsewhere for a suitable plan for the Capitol. Acting upon the advice of Secretary of State Thomas Jefferson, the Commissioners announced a competition that would award $500 and a city lot to the architect who "shall produce to them the most approved PLAN." This competition drew at least sixteen known entries, which varied in quality from bad to indifferent. These designs, which are preserved by the Maryland Historical Society, are a telling commentary on the undeveloped state of the architectural profession in eighteenth-century America.



East elevation of the Capitol ca. 1796
Dr. William Thornton
Library of Congress.

An amateur architect from the British West Indies, Dr. William Thornton (1759–1828) was awarded $500 and a city lot for his design of the Capitol. Five professional architects were hired to build Thornton's design which resulted in many changes to the original—some good, some unfortunate. Still, it was Thornton who established the basic architectural design of the national Capitol.

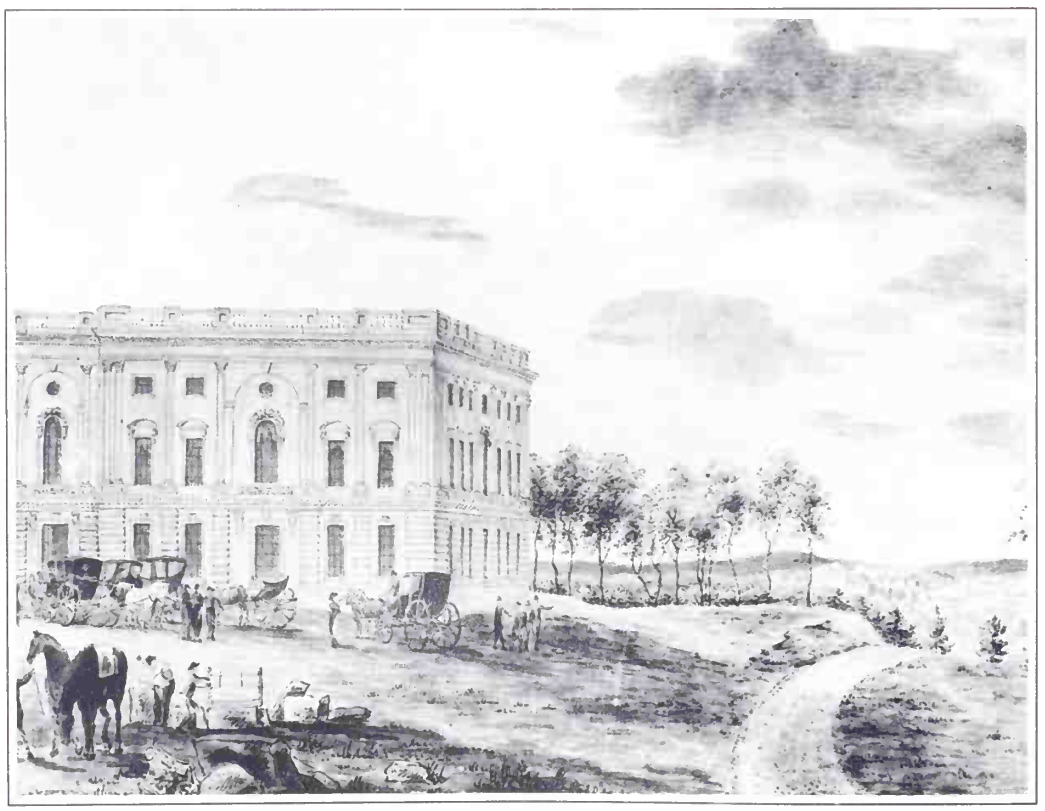
In the fall of 1792, still without a plan for the Capitol, the Commissioners permitted a design to be submitted by an amateur architect from the British West Indies named William Thornton. Thornton was trained in Scotland as a physician but exhibited a talent for architecture and draftsmanship. Upon seeing Thornton's entry, President George Washington recommended it for its "grandeur, simplicity and convenience." After resolving some design problems, the Commissioners awarded Thornton the coveted premium on April 5, 1793.

The winning design for the Capitol consisted of a domed center section inspired by the Pantheon, a much admired second-century-A.D. Roman temple. Flanking this center section were identical wings—one for the Senate and one for the House of Representatives. The elevations were treated with Corinthian pilasters standing on rusticated piers and supporting a full entablature with a balustrade above to mask a low pitched roof. A seven-bay portico standing on a one-story arcade was placed on the center axis in front of the low dome. This design was in

the style and spirit of the Palladian architecture of the English country house of the 1720s and 1730s. Thornton could have known some important houses, such as Chiswick or Holkham Hall, from his visits to England or (more likely) from architectural publications such as Colin Campbell's monumental *Vitruvius Britannicus* (1725). Thornton succeeded in producing a dignified, yet small scale, design that was thought to be within the means of an architecturally ambitious nation.

Construction Begins

On August 1, 1793, workmen began digging the foundations of the Capitol. The cornerstone was laid in the southeast corner on September 18, 1793, by George Washington, who was assisted by Masonic lodges from nearby Georgetown and Alexandria. The foundation work proceeded slowly yet steadily and was finished in the winter of 1796. The work was expensive and painfully slow due to the difficulty of bringing materials and workmen to Capitol Hill. To be lured from their established homes, for instance, stone cutters had to be paid higher than normal wages. Heavy materials, such as sandstone, had to be brought in on boats from quarries at Aquia, Virginia. Sometimes the stone would arrive unfit for use at the Capitol or the boats would be so overloaded with stone that they would sink. Such matters, coupled with an alarming shortage of funds, prompted the Commissioners in August 1796 to cease work on the House Wing and the domed Center Building in order to concentrate their severely limited resources on the North Wing. The government was scheduled to



The Capitol
William R. Birch, 1800
Library of Congress.

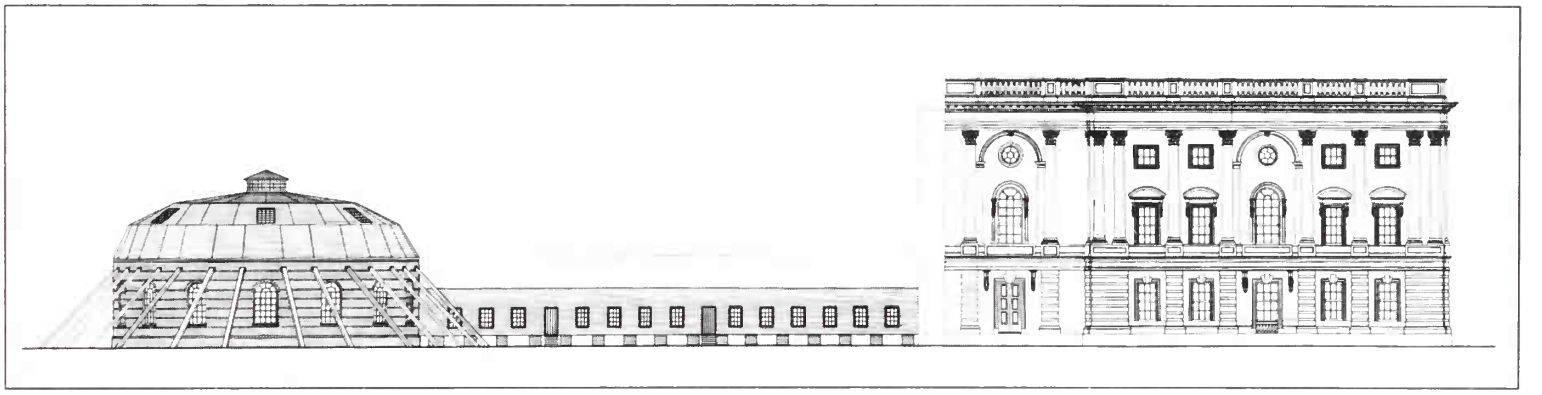
Only the North Wing of the Capitol was finished when Congress moved to the federal city in 1800. President John Adams addressed Congress on November 22, 1800, in the Capitol congratulating them "on the prospect of a residence not to be changed." His wife Abigail, less optimistic, noted that "Congress poured in, but shiver, shiver."

"remove" to its permanent home in Washington in 1800, and the Commissioners knew that one wing of the Capitol ready for Congress was better than nothing ready at all. Even though some rooms on the third floor were still incomplete, the North Wing was substantially finished in 1800 and stood ready to receive the Senate, the House of Representatives, the Supreme Court, the Library of Congress, the District Courts and the sundry clerks, all of whom would share quarters there for a time.

During the initial phase of construction, the Commissioners employed three architects to build the North Wing from Dr. Thornton's plan. The first two, Stephen Hallet and George Hadfield, were dismissed because of changes they tried to impose. The third, James Hoban, best remembered as the architect of the White House, seemed to enjoy the confidence and respect of the Commissioners.

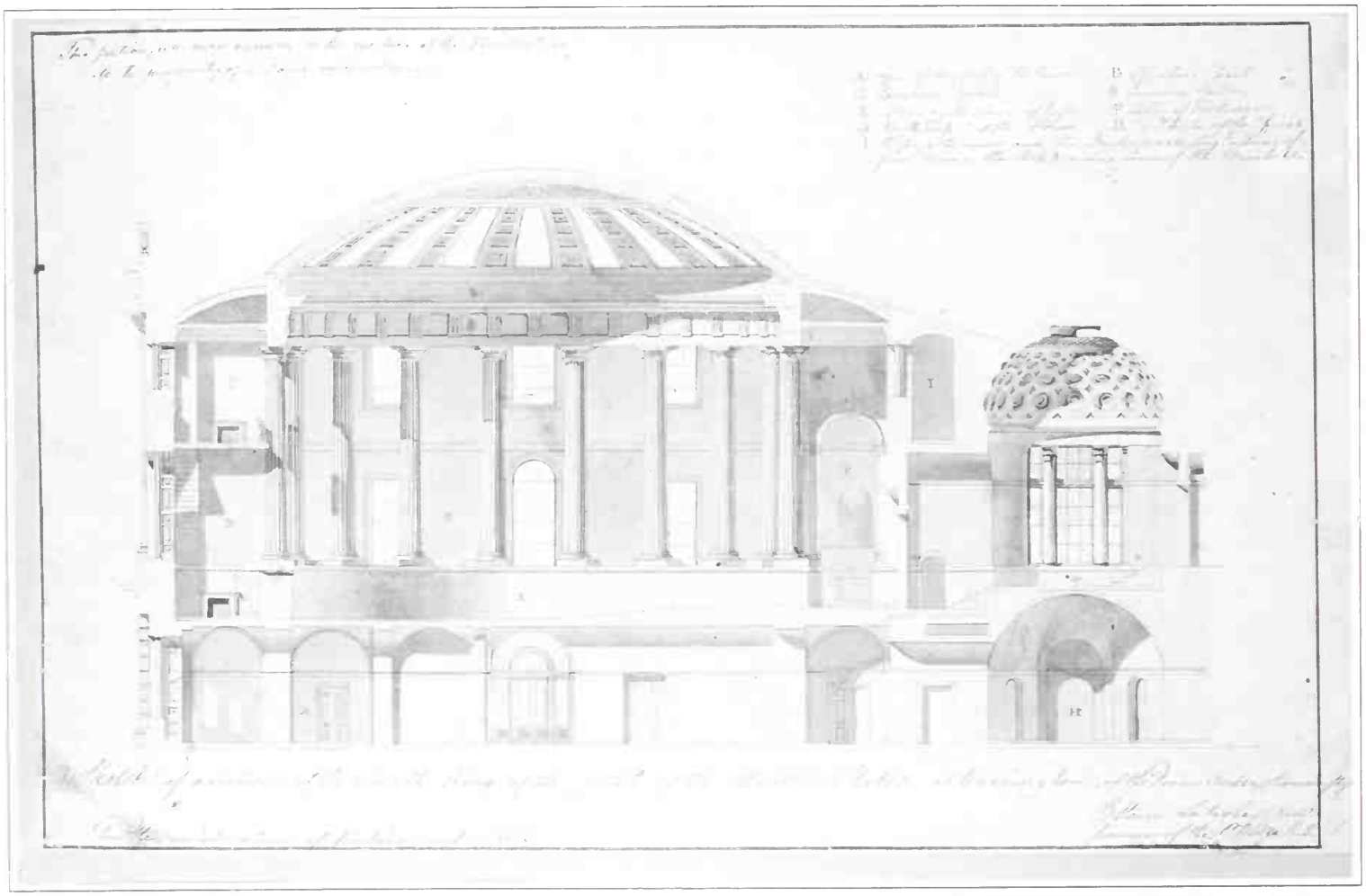
Latrobe and Jefferson

In the middle of President Thomas Jefferson's first term (1803), Congress appropriated $50,000 to continue the stalled building operation at the Capitol. The Commissioners for the District of Columbia—a three-man board—were replaced by a single Superintendent of the City of Washington, and the brilliant Benjamin H. Latrobe was appointed architect. Trained in the London office of S. P. Cockrell, Latrobe was the first professional architect and engineer to work in America. Supervision of the renewed construction was a favorite interest of the President, who was himself a knowledgeable, if self-taught, architect. Jefferson's taste for classical architecture had begun while in college and had become highly cultivated during his four-year residence in Europe. The col-



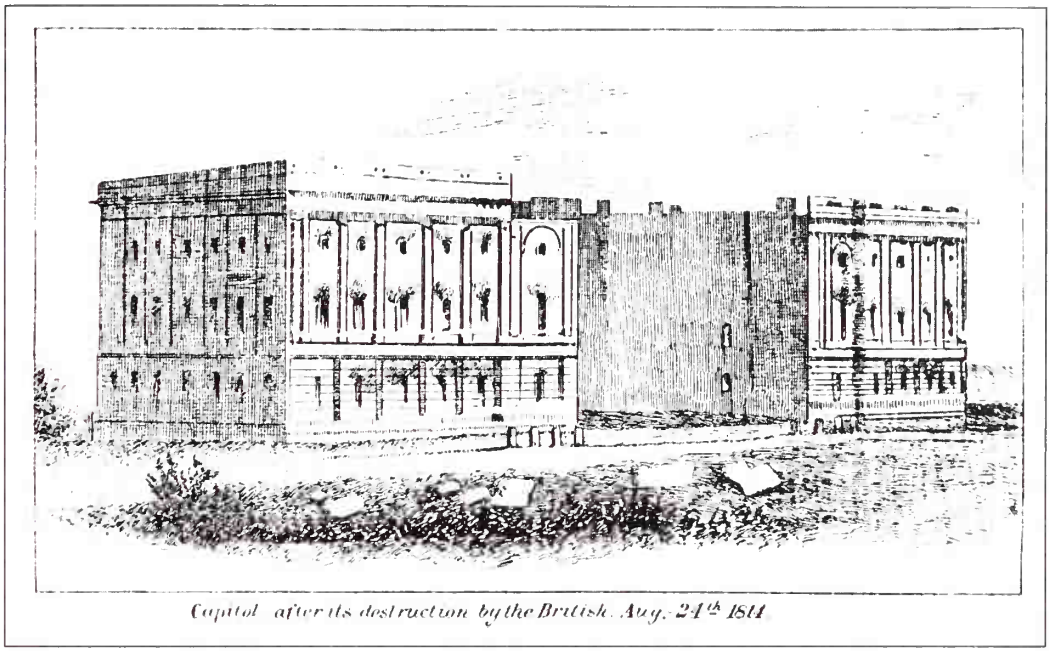
East Elevation of the Capitol, 1804
Conjectural reconstruction, 1989.

During much of President Thomas Jefferson's first term, the Capitol was hardly a building to inspire confidence. A temporary brick structure known as "The Oven" was hastily built in 1801 as a meeting room for the House of Representatives. It was connected to the North Wing by a wooden passage 145 feet long. Both were removed in 1804 to make way for Latrobe's South Wing.



Section of the South Wing
Benjamin Henry Latrobe, 1804
Library of Congress.

The great, sky-lit Hall of the House was designed and built by B. H. Latrobe (1764–1820). This preliminary design illustrates Latrobe's preference for Doric columns instead of the Corinthian order that was eventually used at President Jefferson's insistence. While the chamber was destroyed by the British in 1814, the small domed vestibule at the right has survived intact.



Capitol after its destruction by the British. Aug. 24th 1814

Only two wings were standing when the British burned the Capitol on August 24, 1814. The architect Benjamin Henry Latrobe was rehired to restore the building.

laboration between Jefferson and Latrobe in their efforts to complete the Capitol in an exceptional manner was often stormy, but it was also one of the truly illustrious chapters in the history of American architecture.

Like his predecessors Latrobe found fault with Thornton's plan of the Capitol, particularly that which concerned the South Wing. In Thornton's plan, the entire South Wing, a three-story building measuring 126' x 120', was given over to just one room—the House Chamber. Latrobe recognized the need for offices, committee rooms and other practical conveniences. He proposed to raise the House Chamber to the second floor, below which would be the offices. He also proposed to alter the shape of the House Chamber from an ellipse to more easily constructed semicircles connected by colonnades. Both of these departures from the original plan won Jefferson's enthusiastic approval and Dr. Thornton's unrelenting scorn.

Latrobe began construction of the South Wing by removing a temporary building known as "The Oven," in which the House of Representatives had met, and rebuilt the foundations according to his revised plan. Other long abandoned foundations were rebuilt strong enough to support solid brick vaulting. Vaults would be much more permanent and fireproof than ordinary brick and wood construction. Critics, many of whom had never seen a masonry vault, complained of the expense and danger involved. Undaunted, Latrobe pressed on to finish the wing, which included the Hall of the House with its carved stone columns (modeled on the ancient Temple of the Winds at Athens), a marble floor, sculpture, one-hundred skylights, luxurious draperies and central heating. Overcoming great difficulties Latrobe created what some thought was the most handsome room in America. Praising Latrobe's work at the Capitol, Jefferson concluded that, when finished, it would be "worthy of the first temple dedicated to the sovereignty of the people, embellishing with Athenian taste the course of a nation looking far beyond the range of Athenian destinies."

While the South Wing was underway, Latrobe turned his attention to the North Wing, which he found in a serious state of decay. The condition of the Senate Chamber, located on the ground floor, was particularly alarming due to falling plaster and a rotting floor. Latrobe would not have been content merely to patch and repair the Chamber but proposed instead to rebuild the interior of the North Wing in vaulted construction to equal that of the South Wing. He proposed to raise the Senate Chamber to the main level and insert a room designed especially for the Supreme Court on the ground floor below. These proposals were accepted, and the rebuilding was begun in 1808. In a few months, during one of Latrobe's frequent absences from Washington, tragedy struck. In a rush to remove the wooden centering on which the vault of the Supreme Court was built, the vault collapsed killing the Clerk of the Works John Lenthall. The accident was a great blow to Latrobe and his reputation. Despite all his works of genius and magnificence, Latrobe was never able to shake the stigma of Lenthall's death.

With his pride and reputation severely wounded, Latrobe redoubled his efforts to rebuild the North Wing in a splendid and durable manner. A fine example of his success is found in the east entrance to the Senate Wing. Here Latrobe carried the weight of the brick vaults on sandstone columns carved with distinctly American ears of corn. These so-called "corn-cob columns" won Latrobe much praise but, curiously, were not imitated elsewhere.

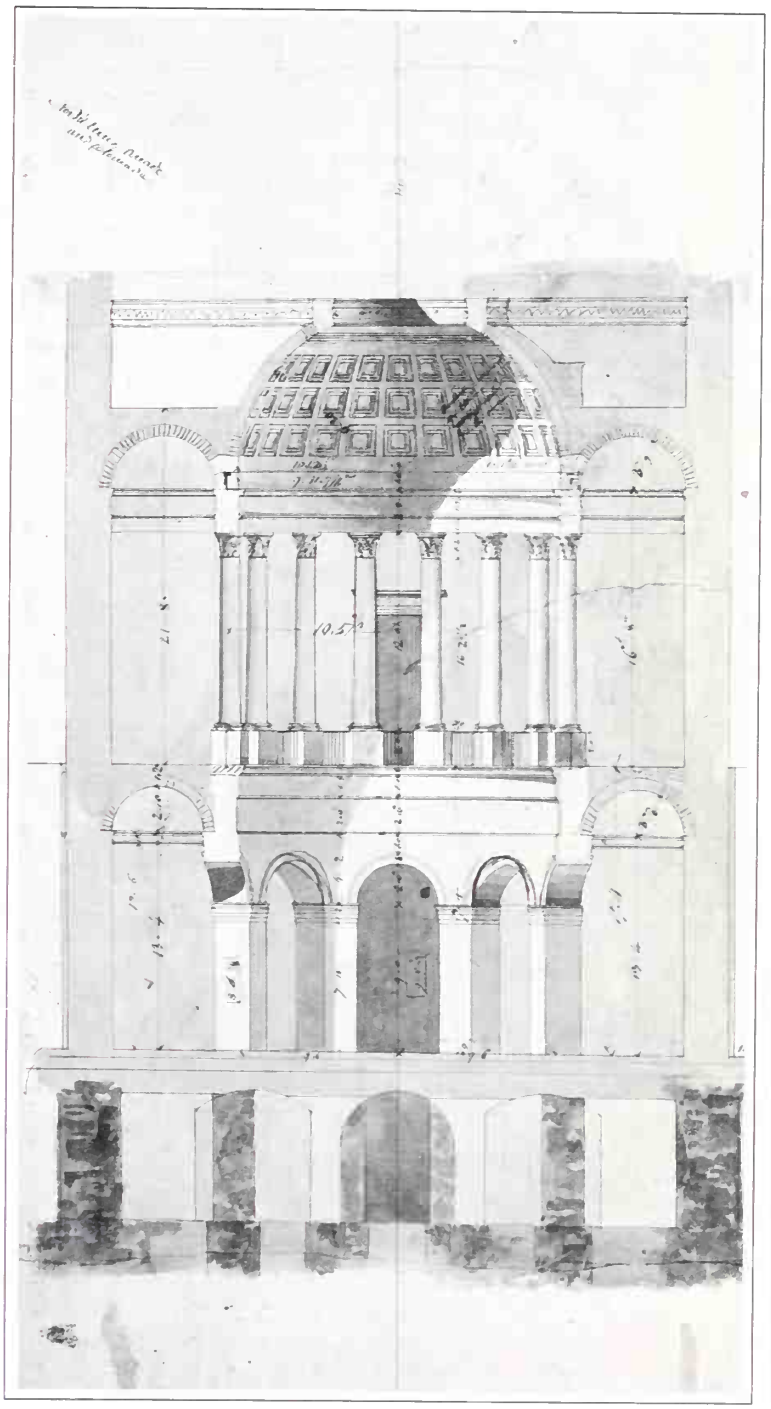
By 1811 Latrobe had only rebuilt the eastern half of the North Wing because the funds he needed to carry on the work were being diverted to prepare the national defense for a second war with Great Britain. Without building funds or employment, Latrobe left Washington in 1813. When he returned two years later, he described the Capitol as "a most magnificent ruin." It had, on August 24, 1814, been severely damaged by fires set by British troops under the command of Sir George Cockburn. A sudden rainstorm prevented total destruction.

Capitol Restoration 1815-1819

The Capitol had been under construction for twenty-two years when Latrobe was asked to undertake its repair. Some Congressmen did not think the effort worthwhile and tried to have the federal government abandon its home in Washington in favor of a more central, cosmopolitan or secure location. These efforts failed when Congress authorized President James Madison to borrow $500,000 to rebuild the public buildings.

Latrobe began the restoration of the North and South Wings by cleaning the exterior stone of smoke and fire damage. Stone that was beyond repair was replaced. Meanwhile, changes to the floor plan were made to enlarge the Senate Chamber and to provide additional committee rooms. The House Chamber would be rebuilt as a half-domed semicircle much like the amphitheaters of ancient Greece and Rome. A newly discovered marble from the upper Potomac was used for the columns Latrobe designed for the two principal chambers. Latrobe modeled the Corinthian columns in the House Chamber after the Choragic Monument of Lysicrates in Athens, while the Ionic order of the Erechtheion, also in Athens, was used in the Senate Chamber.

In his efforts to achieve convenience, magnificence and luxury, Latrobe was willing to ignore a constant clamoring for speed and economy. Most delays were beyond the architect's control, while costs ran far above his unrealistic estimates. In a dispute over vaulting the ceilings of the House and Senate Chambers, a dispute Latrobe lost, he resigned in November 1817. Unpopular and discouraged, he left Washington never to return.



Small Senate Rotunda
Benjamin Henry Latrobe, ca. 1815
Library of Congress.

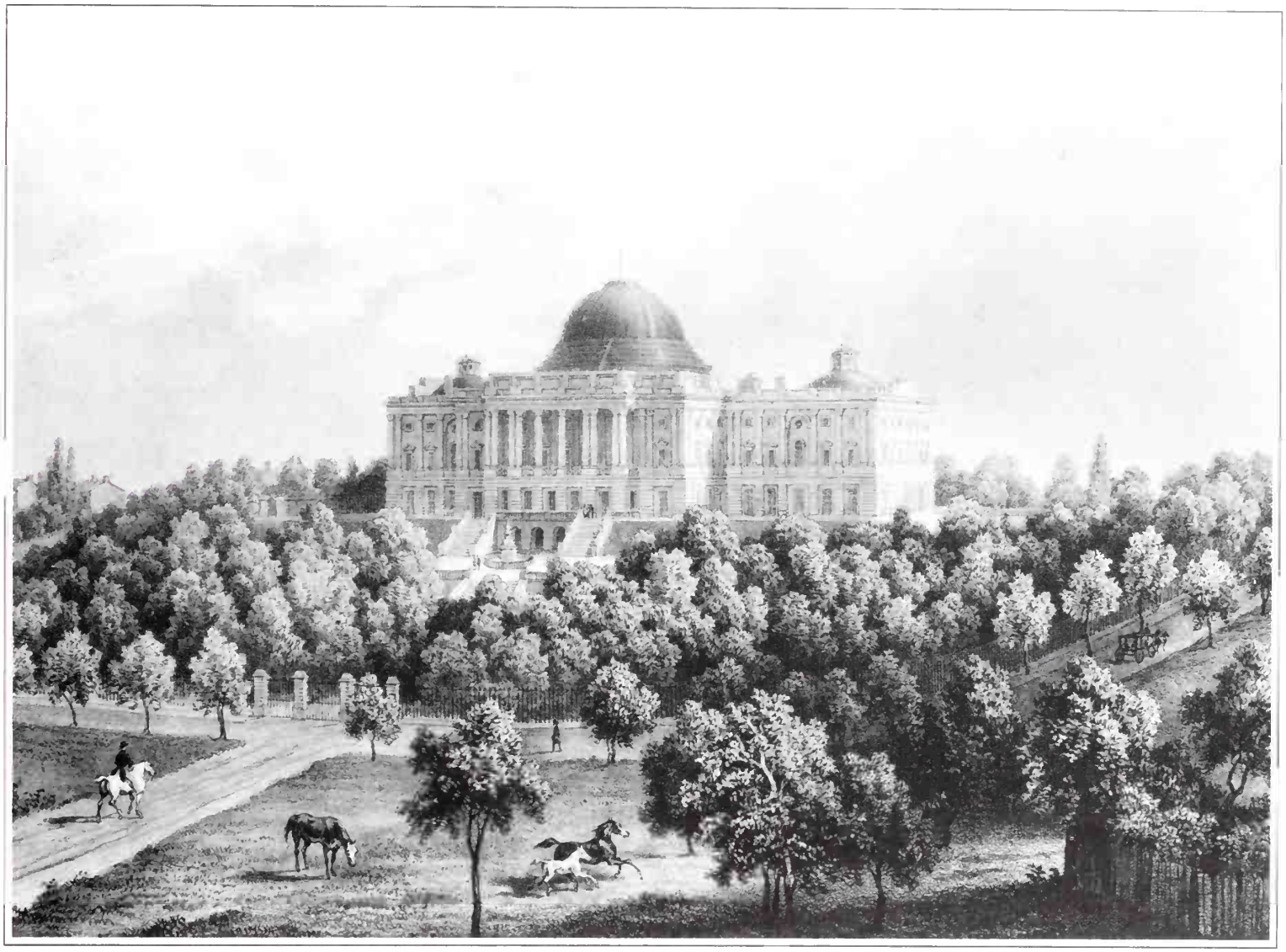
As part of the restoration of the Capitol after the fire of 1814, Latrobe installed this domed peristyle within an oval space that had first served as a stair hall. The column capitals were designed with native American tobacco leaves. Called the "ornamental air shaft" during the nineteenth century, the small rotunda was a practical device that helped to light and ventilate the original Senate Wing.

Completing the Capitol

Few men in America were capable of filling the void at the Capitol caused by Latrobe's departure. President James Monroe wondered if two architects would be needed to fill Latrobe's place. The President and the Commissioner of Public Buildings (whose office had been created in 1816) finally hired Charles Bulfinch, a Bostonian with considerable experience in public architecture. Bulfinch did not have Latrobe's flair or genius, but his conservative, modest and quiet manner, his unreproachable integrity and common sense made him a favorite with the President and Congress.

East Front of the Capitol
John Plumbe, ca. 1846
Library of Congress.

Discovered at a flea market in California, this is the earliest known photograph of the Capitol.



West Front of the Capitol
August Kollner, 1839
Library of Congress.

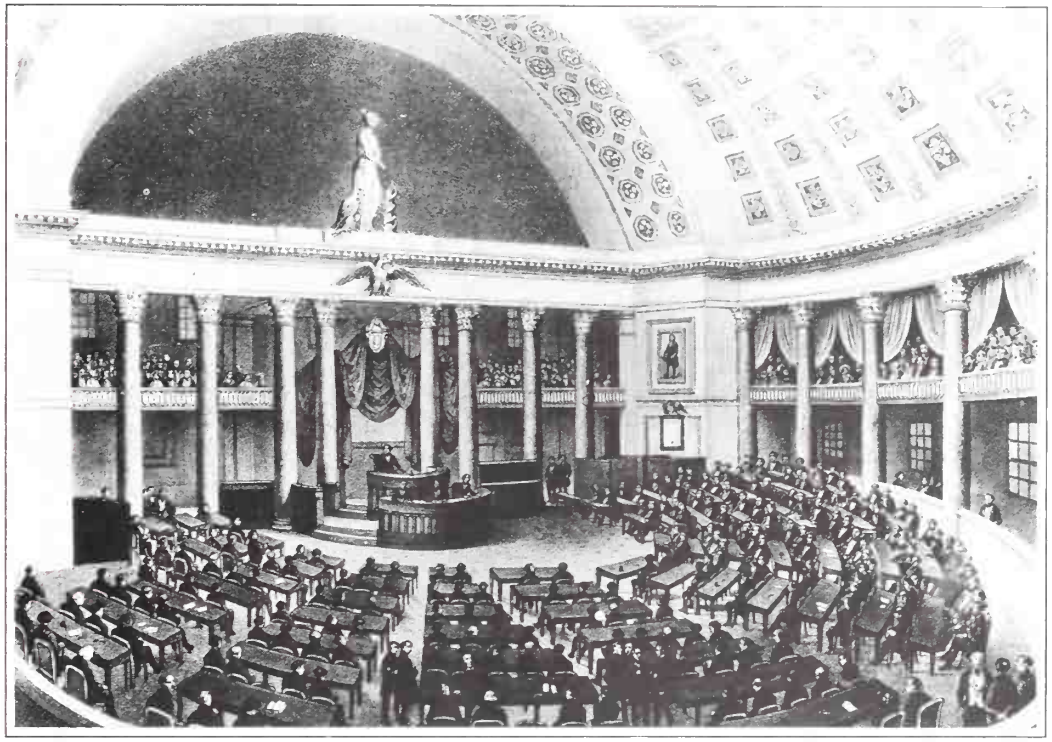
Commanding its position on the brow of Jenkins' Hill, the West Front of the Capitol overlooked the heavily forested, fenced garden below and the Mall beyond. Behind the central portico was, until 1897, the Library of Congress.

"Daniel Webster Addressing the U.S. Senate on the Compromise Measure, March 7th 1850"
E. Brown, 1856.

While the Chamber was crowded with sixty Senators representing thirty states at the time of Webster's address, over one-hundred prominent men are depicted on the floor on the Chamber in this view. More than anything, this is a Senatorial "group portrait" with the Chamber as an appropriate, if somewhat sketchily drawn, backdrop.

In 1818 Bulfinch began his employment at the Capitol by continuing to repair and restore the North and South Wings. In March 1819 the Supreme Court met in its restored chamber while the rooms for the House and Senate were both ready in December 1819.

Bulfinch began construction on the long awaited Center Building in 1818. Although designs for this section had been handed down by both Thornton and Latrobe, Bulfinch redesigned it according to his own ideas and taste. In the West Portico, for instance, Bulfinch recalled his own design for the Massachusetts State House of 1795–97. A basement story for committee rooms and offices was cleverly hidden by an earthen terrace that also formed twin courtyards on the West Front. These courtyards were convenient spots for privies and other necessary evils best kept out of public view. The copper-covered wooden dome, which was replaced in the mid 1850s, was made high—too high in Bulfinch's opinion—at the behest of President Monroe and his Secretary of State John Quincy Adams. They considered a lofty dome appropriate for the nation's most prominent building. The last part of the Capitol—the East Portico—was finished in 1826. For the next four years Bulfinch worked at finishing and perfecting details: sculpture, landscaping, fencing and gatehouses. He departed Washington in 1830 on friendly terms, having brought the Capitol to a finish after thirty-seven years of construction.



Chamber of Representatives
August Kollner, ca. 1848.

The Hall of the House suffered a problem more severe than overcrowding. It was plagued by bad acoustics. Some Members of Congress blamed the acoustical problems of the old Hall for the political anarchy that led to civil war. All attempts to muffle annoying echoes failed, resulting in the decision to build an entirely new Hall in which debates could be easily understood.

A Twenty-Year Lull: 1830-1850

With the departure of Charles Bulfinch the Capitol was at long last completed. Its care and maintenance was entrusted to the Commissioner of Public Buildings, whose office was in the Capitol and who was required by law to live nearby. A small labor force attended to routine maintenance of the building and grounds. Larger projects, such as painting the outside stone walls, were performed by private contractors. The exterior of the Capitol was first painted in 1818 to protect the fragile stone from the weather and was periodically repainted thereafter. In 1832 running water was introduced into the Capitol, and in the 1840s the building was lit by gas. Desks and chairs were added to the already crowded House and Senate Chambers as state after state was admitted into the Union. Lands acquired by the Louisiana Purchase and from the Mexican War were rapidly organized into territories and eventually became states. The nation was outgrowing its Capitol, and by 1850 a solution to this problem was desperately needed.

The Competition of 1850

In response to the alarming space crunch, the Senate Committee on Public Buildings voted in 1850 to stage a competition among architects for designs to extend the Capitol. Like the competition of 1792, the prize was to be a cash award of $500, but there was no offer of a city lot. The Committee reserved the right to split the prize money and use the designs any way it saw fit. The competition results were inconclusive: the prize money was split five ways. On September 30, 1850, Congress made an initial appropriation of $100,000 for the much needed extension and authorized President Millard Fillmore to appoint an architect. In 1851 he chose Thomas U. Walter, a fellow Whig and prominent Philadelphia architect who had also been one of the contestants in the Senate-sponsored competition. Over the next fourteen years Walter more than doubled the size of the Capitol, gave it the familiar cast iron dome and lavished the interior with the finest that mid-nineteenth-century American art and industry could provide.

Designs for the Capitol Extension

Prior to his appointment, Thomas U. Walter had explored various ways to extend the Capitol to meet the space needs of Congress. At the behest of the House of Representatives, he considered placing a vast addition on the eastern (principal) elevation, which would not have required enlarging the Capitol grounds. A second scheme, which was favored by the Senate, called for large detached wings to be placed at either end of the existing structure and connected to it by narrow connecting corridors. The corridors were designed at the suggestion of Fillmore's Secretary of State Daniel Webster. By adding to the building with detached wings, which readily became the accepted approach, those in authority showed unusual sensitivity to the political and architectural history of the Capitol.

The exterior of each wing was designed to closely follow the architectural vocabulary of the existing building. As in the old Capitol, Corinthian pilasters, standing on rusticated piers, support a full entablature and balustrade. Porticos were placed on the side elevations as well as the east and west fronts. Evidence of the current taste for Grecian architecture appears in some of the carvings of the exterior marble and throughout the interior. Segmentally arched windows on the first floor may be considered somewhat Italianate, while the Gothic Revival makes a show, although a minor one, on the interior. Walter made these huge wings architecturally compatible with the existing Capitol while introducing subtle references to the architectural styles of his own day.

There was never any thought of using sandstone from Virginia as the veneer for the Capitol extensions. Cracking and spalling had already given the existing building a somewhat shabby appearance. Marble from Lee, Massachusetts, was selected instead of sandstone. Marble quarries near Baltimore supplied the monolithic column shafts for the porticos. Both of these marbles were subjected to rigorous tests for strength and durability. Among those appointed by President Fillmore to oversee the marble tests were Joseph Henry, first Secretary of the Smithsonian Institution, and Andrew Jackson Downing, America's foremost horticulturist and architectural theorist.

In June 1851 construction began on the extension of the Capitol. The cornerstone was laid by President Fillmore on July 4, 1851, in a ceremony highlighted by a rousing oration given by Secretary of State Daniel Webster.

When Franklin Pierce succeeded Fillmore as President in 1853, control of the work was transferred to the War Department, and Montgomery C. Meigs, a captain in the Corps of Engineers, was placed in charge. Meigs, a talented administrator as well as an accomplished engi-

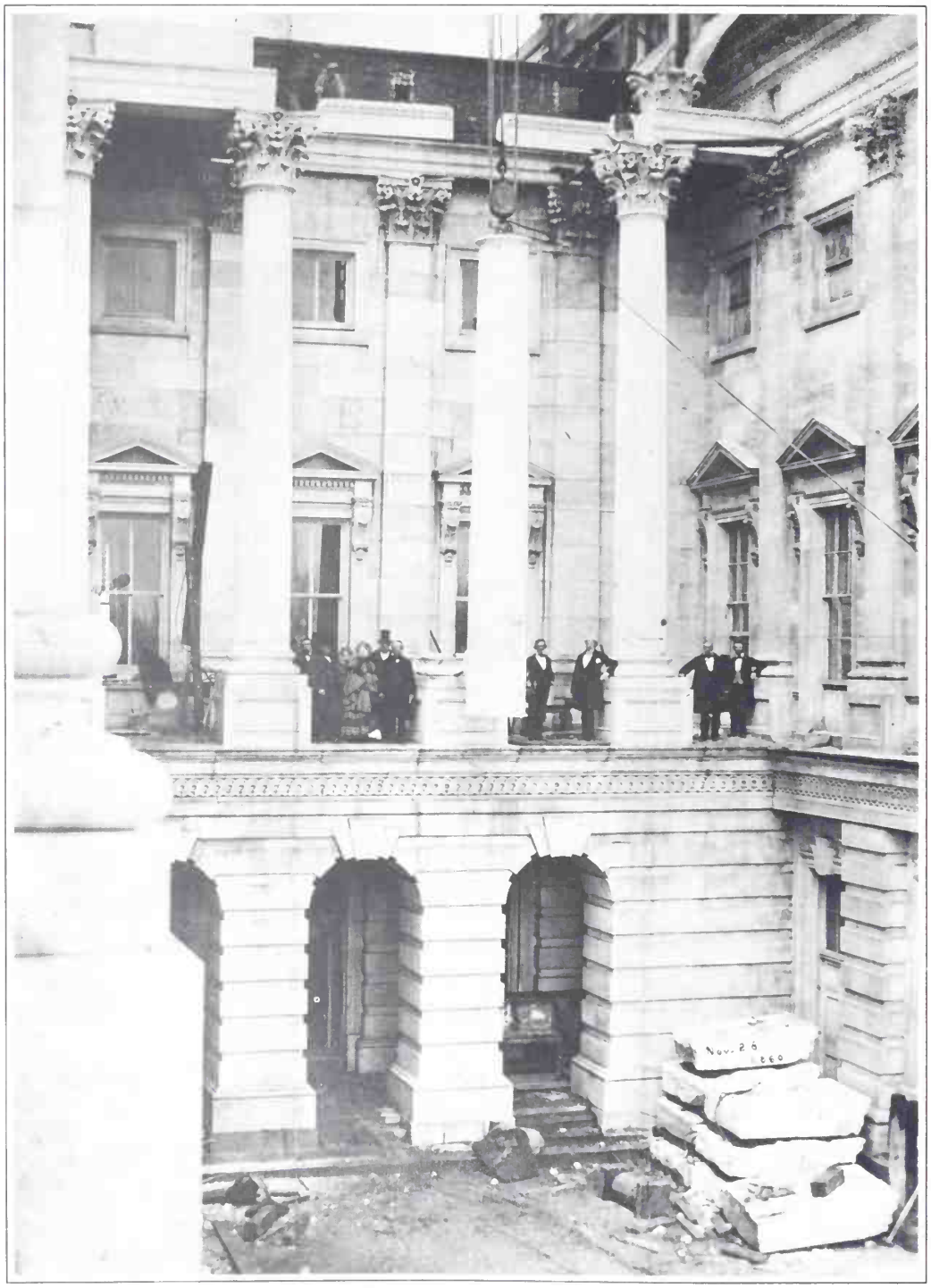
neer, immediately proposed changes to Walter's approved plans. These changes were concerned particularly with the location of the new House and Senate Chambers within their respective wings. While Walter had planned these two-story rooms to occupy positions in the western half of the wings, with access to natural light and ventilation, Meigs proposed to bring them into the center and surround them by corridors and committee rooms. The chambers, thus positioned, would be lighted by skylights and ventilated by steam-powered fans. Meigs' proposal offered some advantages over Walter's original plan, and President Pierce approved the changes.

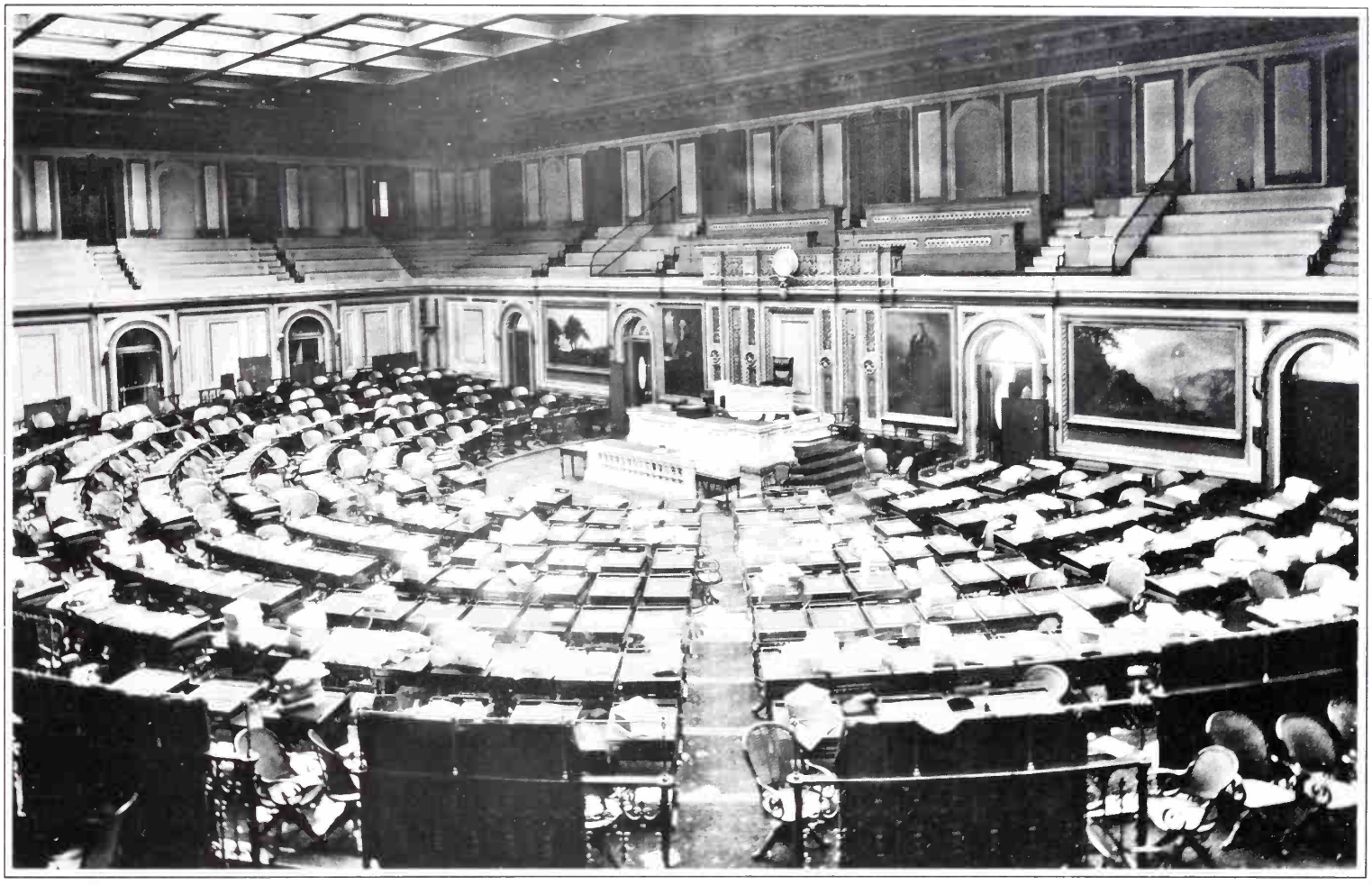
Design for the extension of the Capitol
Thomas U. Walter, 1851
The Athenaeum of Philadelphia.

A prominent Philadelphia architect Thomas Ustick Walter (1804–1887) prepared this scheme for enlarging the Capitol, which was approved by President Millard Fillmore on June 11, 1851. Two large wings, placed at right angles to the existing building, were connected to north and south ends of the Capitol by narrow corridors.

Marble column shaft being hoisted in place, House connecting corridor November 28, 1860.

Standing next to the column are architect Thomas U. Walter, with hand on hip, and Senator Jefferson Davis of Mississippi. As Secretary of War during the administration of Franklin Pierce, Davis administered the building operations at the Capitol. As senator, Davis was instrumental in securing the first appropriation for the Capitol extensions.



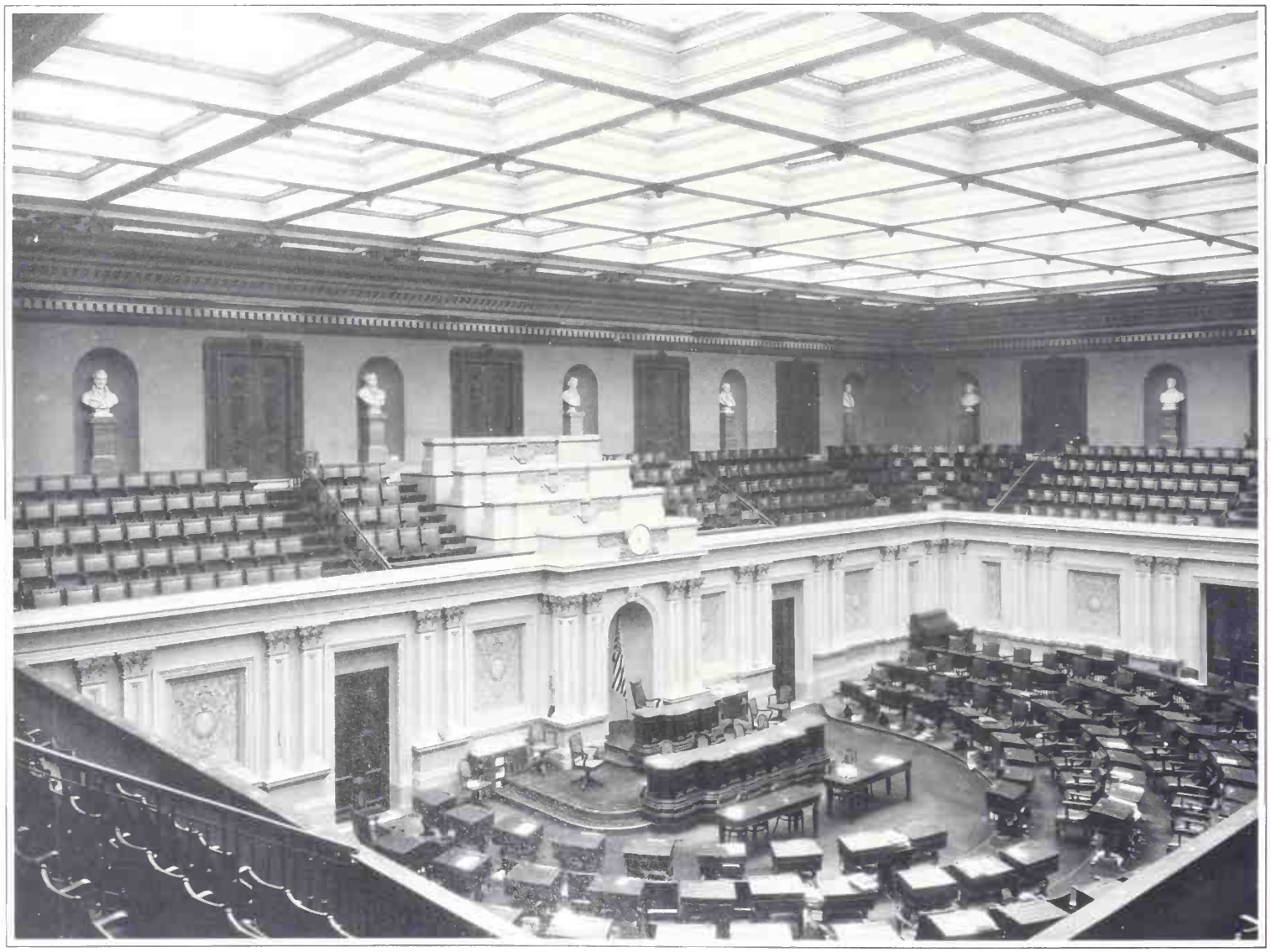


Hall of the House, ca. 1900.

Shown in this view are the portraits of Washington and Lafayette that first hung in the old Hall of the House, now Statuary Hall. Two additional paintings by Albert Bierstadt were removed from the chamber in 1901. Individual desks, usually crammed with papers, served as the Member's office until the first office building was opened in 1908.

At the beginning of their association, Walter, the architect, and Meigs, the engineer, seemed to have worked together harmoniously. Along with his talents, however, Meigs' overbearing arrogance clashed with Walter's mild manner and professional self esteem. Calling Walter a "Disobedient and rebellious assistant," Meigs tried on several occasions to have him dismissed. Instead, President James Buchanan removed Meigs in 1859 and appointed Captain William B. Franklin of the Corps of Topographical Engineers to take his place. Walter, whose sense of vindication must have been consoling, enjoyed a cordial relationship with Captain Franklin.

Despite the animosity between Walter and Meigs, construction of the Capitol extensions proceeded rapidly. Although much remained to be finished in the wings, the House of Representatives first met in its new chamber on



Senate Chamber, 1927.

Until it was removed in 1949, a great iron and glass ceiling was suspended above the Senate Chamber. Many of the desks and chairs have been in use since 1819.

The Member's Retiring Room, ca. 1900.
In 1879 three small rooms behind the Hall of the House were joined together to create a clublike lounge for Members. The center room, with its elaborate cast iron ceiling, originally served as the Speaker's office. The peculiar furnishings, with griffin's heads and lion's feet, are nowhere to be seen today. Happily, the multi-armed wall sconces have survived in place.

The Senator's Retiring Room ("The Marble Room"), ca. 1900.

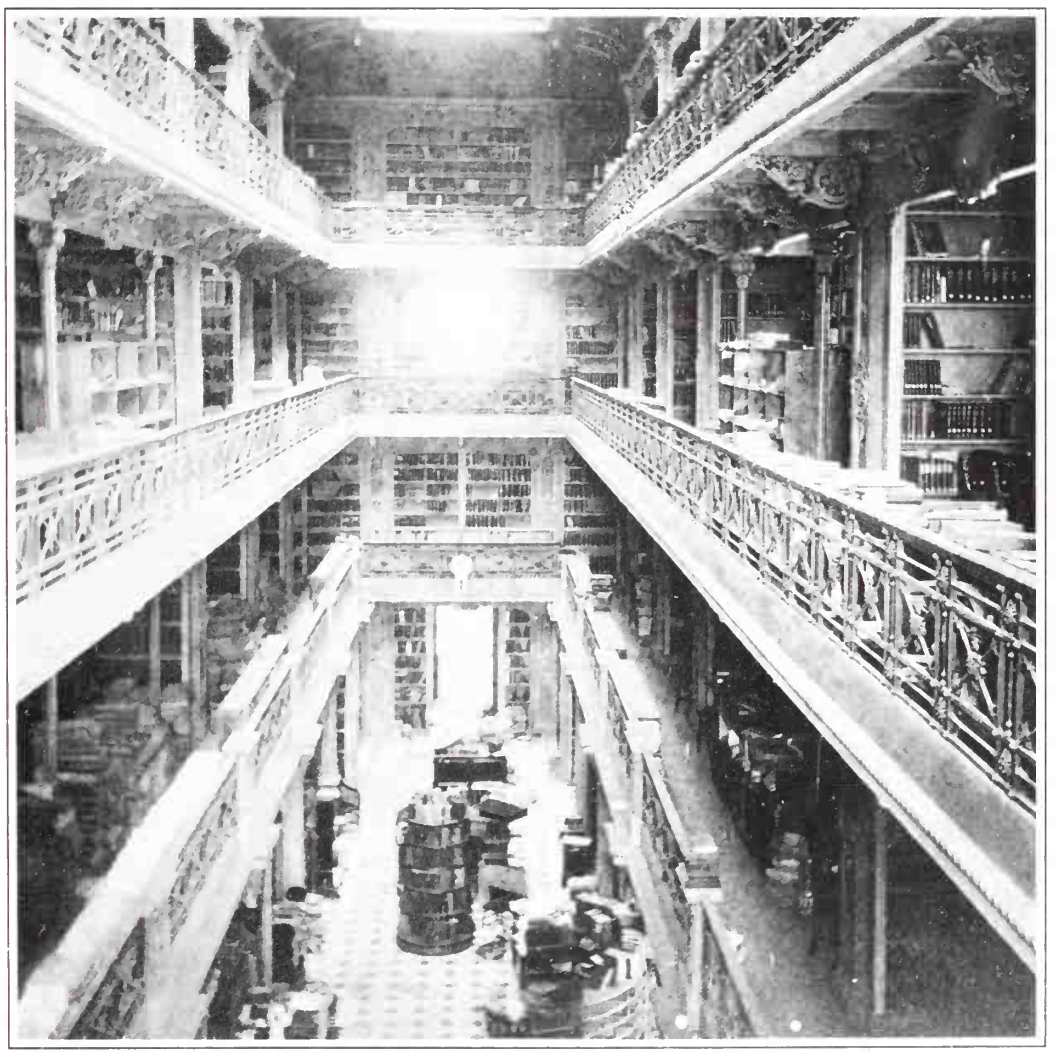
Located just off the Chamber, this room still provides a private and convenient lounge for Senators. Except for the floor, the room is finished entirely in marble. Shown here during the hot summer months, the carpets have been removed and the heavy window draperies have undoubtedly been taken down. These housekeeping practices were no longer necessary once the Capitol was air conditioned.

December 16, 1857, and the Senate, in its new chamber on January 4, 1859.

Once both Houses of Congress vacated their rooms in the old Capitol, it became necessary to find a use for each of these historic chambers. The old Senate Chamber was easily converted for use by the Supreme Court, whose former room on the first floor was refitted as the Law Library. The original House Chamber, however, was less susceptible to adaptive reuse. For some years after the House vacated its chamber, the room was home to a motley assortment of peddlers and hawkers. Some proposed to dismantle the room and build two stories of committee rooms in the space. Justin Morrill, a Congressman from Vermont, proposed in 1864 to save Latrobe's inspired design and transform it into a National Statuary Hall. Morrill's proposal, which became law on July 2, 1864, was another early instance of an emerging appreciation of America's political and architectural heritage.

The Library of Congress

On Christmas Eve 1851, a spark from one of the stoves in the Library of Congress caused a disastrous fire that gutted the room and destroyed much of the Library's valuable collection. Built by Bulfinch in the West Central Building, the room was as popular with legislators and visitors for its views down the Mall as for its unrivaled collections or chaste Greek Revival architecture. Thomas U. Walter, already on hand working on the extensions, was called upon to restore the Library. For the restoration Walter designed the first room in America constructed of fireproof cast iron. It remained in use until 1897 when the Library of Congress moved into its new quarters across the street. In 1901 the cast iron interior of Walter's Library was sold for scrap and the space rebuilt into two floors of offices and committee rooms.

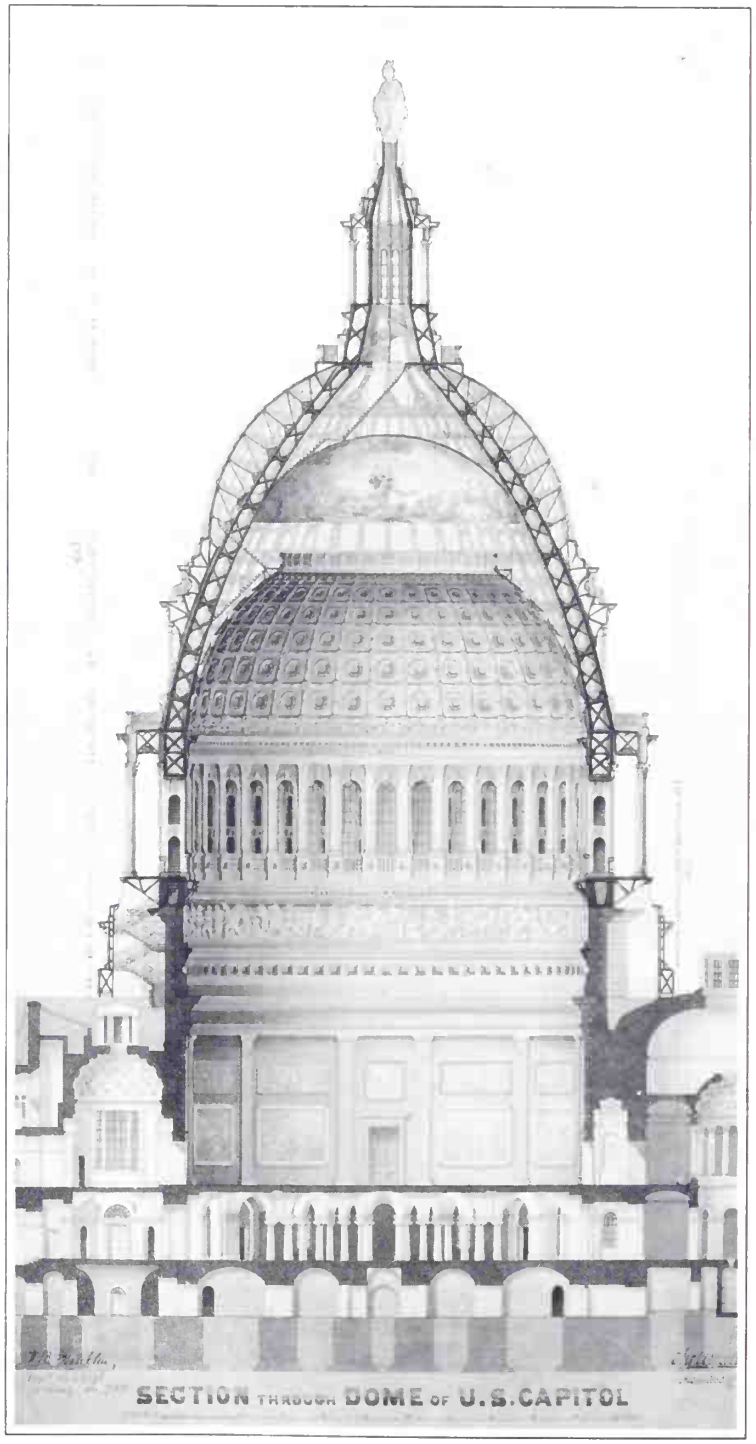


View of the Library of Congress ca. 1897. Until it moved out of the Capitol in 1897, the Library of Congress suffered from severe overcrowding. Passage of the Copyright Act of 1870 required that two copies of every work protected by the law would be deposited in the Congressional Library.

The Cast Iron Dome

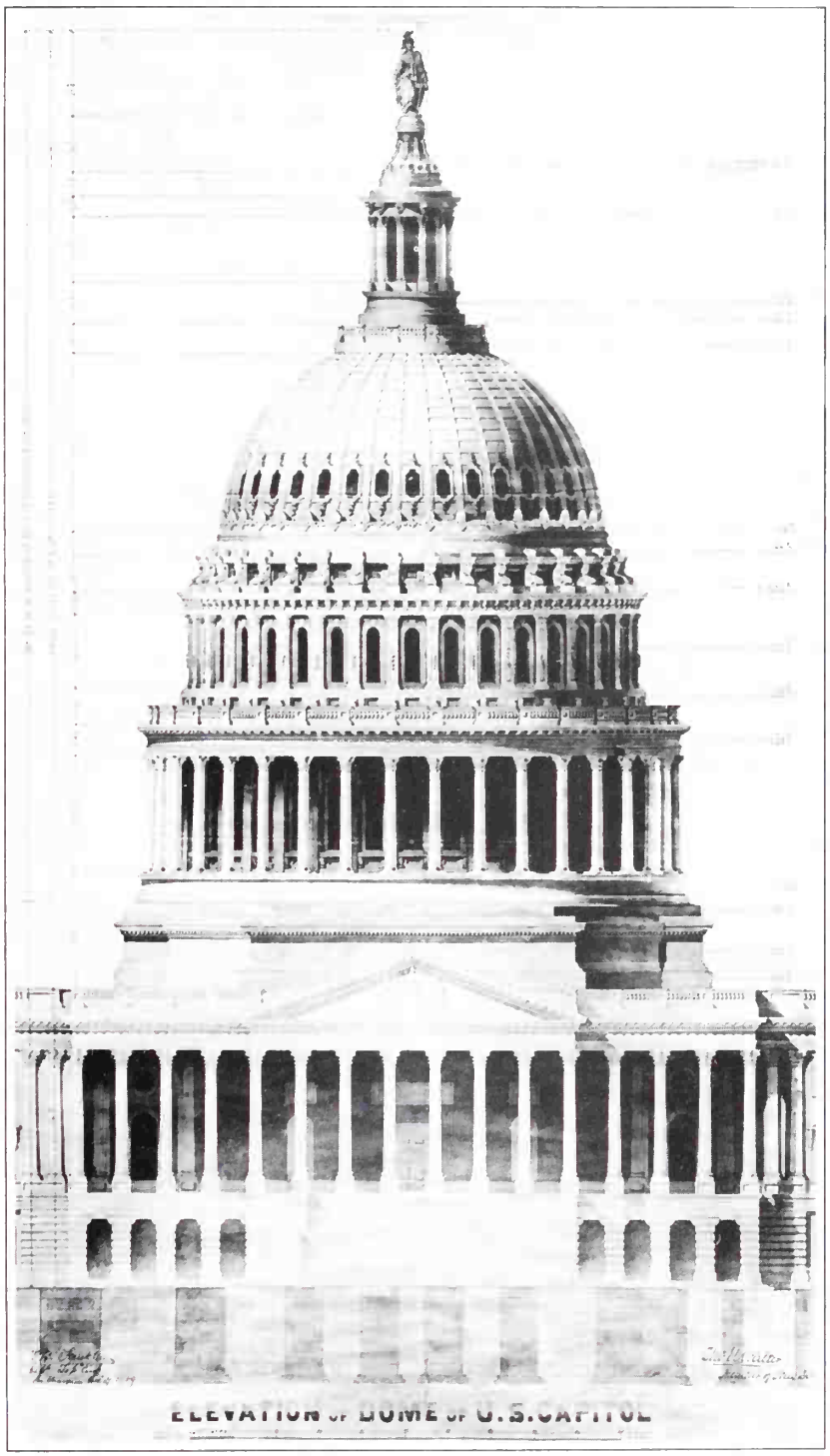
With the construction of the new House and Senate Wings, the length of the Capitol was more than doubled (from 351' to 746'). This enlargement made the original Bulfinch dome—once thought too big—seem hopelessly small and underscale. Made of wood, it was also susceptible to fire—a mounting concern since the Library of Congress disaster. It also leaked. For these three reasons it was decided in 1855 to remove the old dome and replace it with one of cast iron. Again it was Thomas U. Walter who provided the design.

To design a fitting dome for the national Capitol, Walter turned to existing models for guidance. St. Paul's in London, St. Peter's in Rome, the Pantheon in Paris and St. Isaac's in Leningrad provided much of his inspiration.



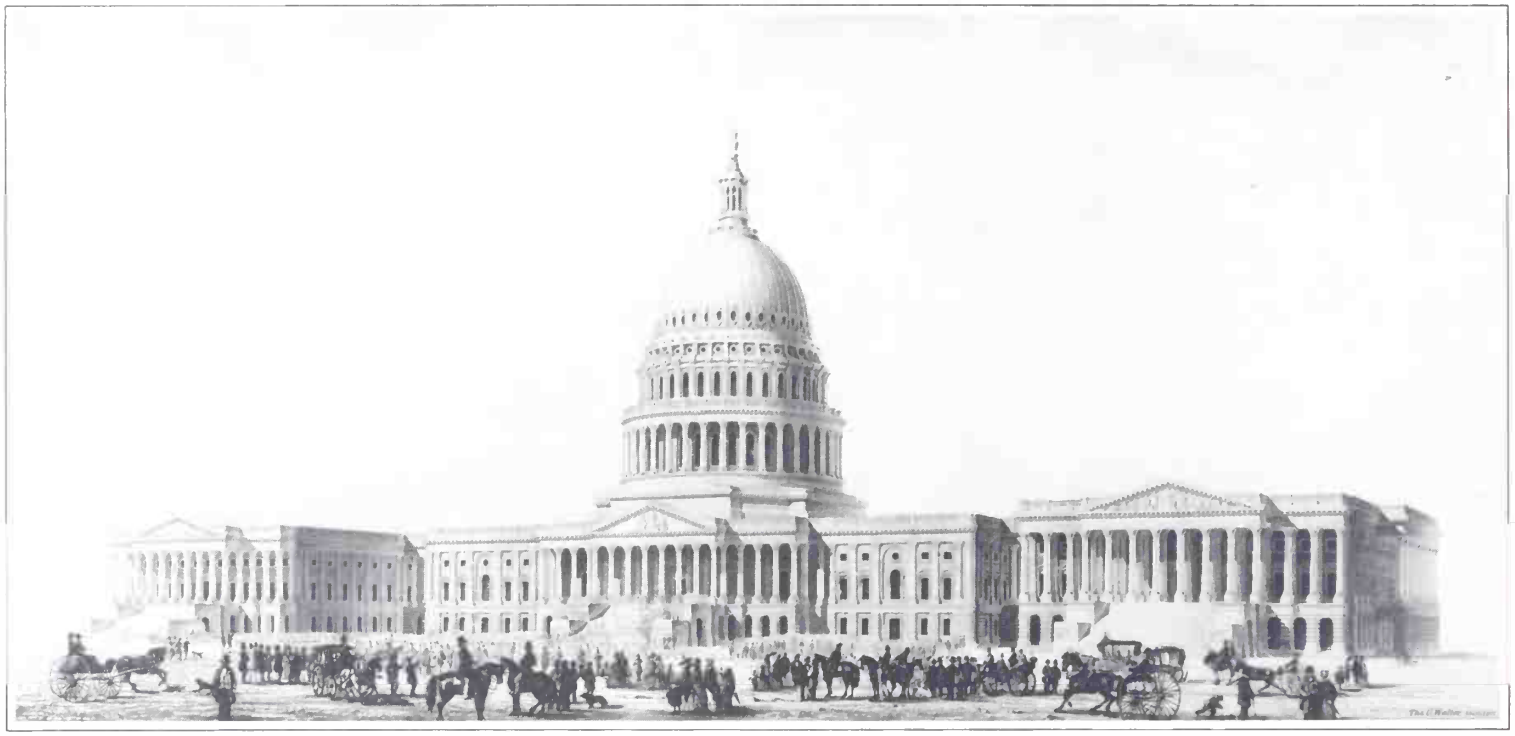
Section of the Dome
Thomas U. Walter, 1859.

Suspended over the eye of the inner dome is Constantino Brumidi's painting of The Apotheosis of Washington, *completed in 1866. The idea of a double dome, with a monumental painting between, was derived from the Pantheon in Paris, which Thomas U. Walter had studied and admired in 1838 during his tour of Europe.*



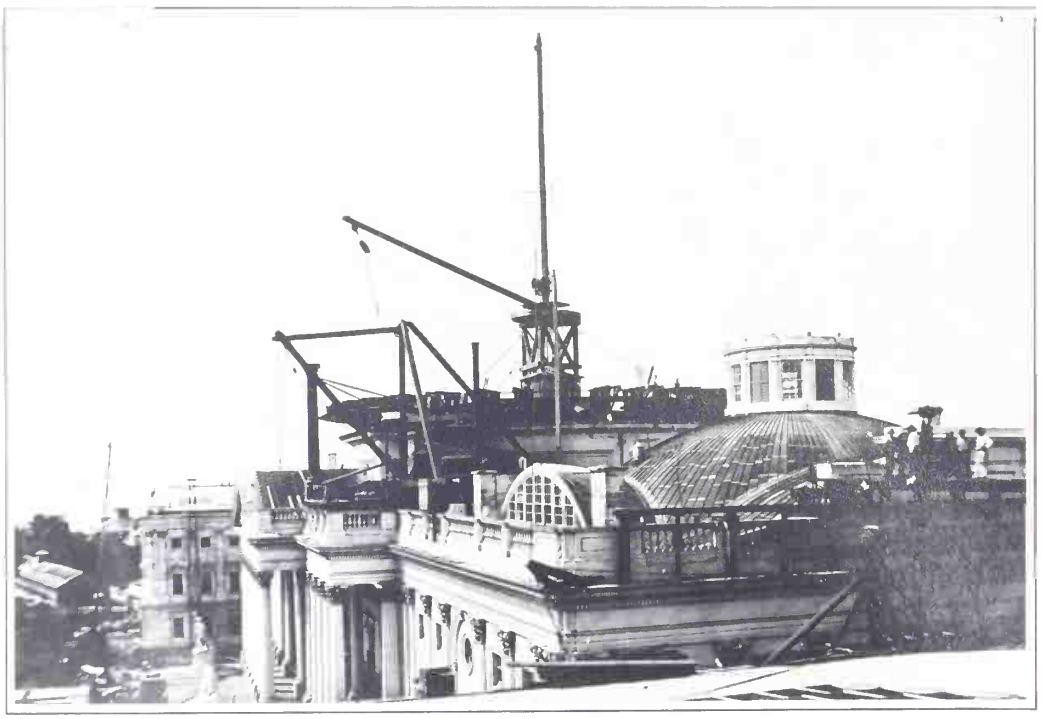
Elevation of the Dome
Thomas U. Walter, 1859.

Nearly nine million pounds of cast iron were used to build the Capitol dome. Most of the iron was cast in Brooklyn, New York, by the firm of Janes, Fowler, Kirtland and Company for seven cents per pound installed. The dome cost $1,047,291.



Architect's rendering of the Capitol as it would look with a new cast iron dome
Thomas U. Walter, 1855
The Athenaeum of Philadelphia.

To show how the Capitol would appear once the extension and dome were completed, Walter drew this perspective view with the east plaza crowded with carriages and people. Much of Walter's commercial success as an architect was due to his exquisite draftsmanship, his masterly use of perspective and his inclusion of lively and fashionably dressed figures.



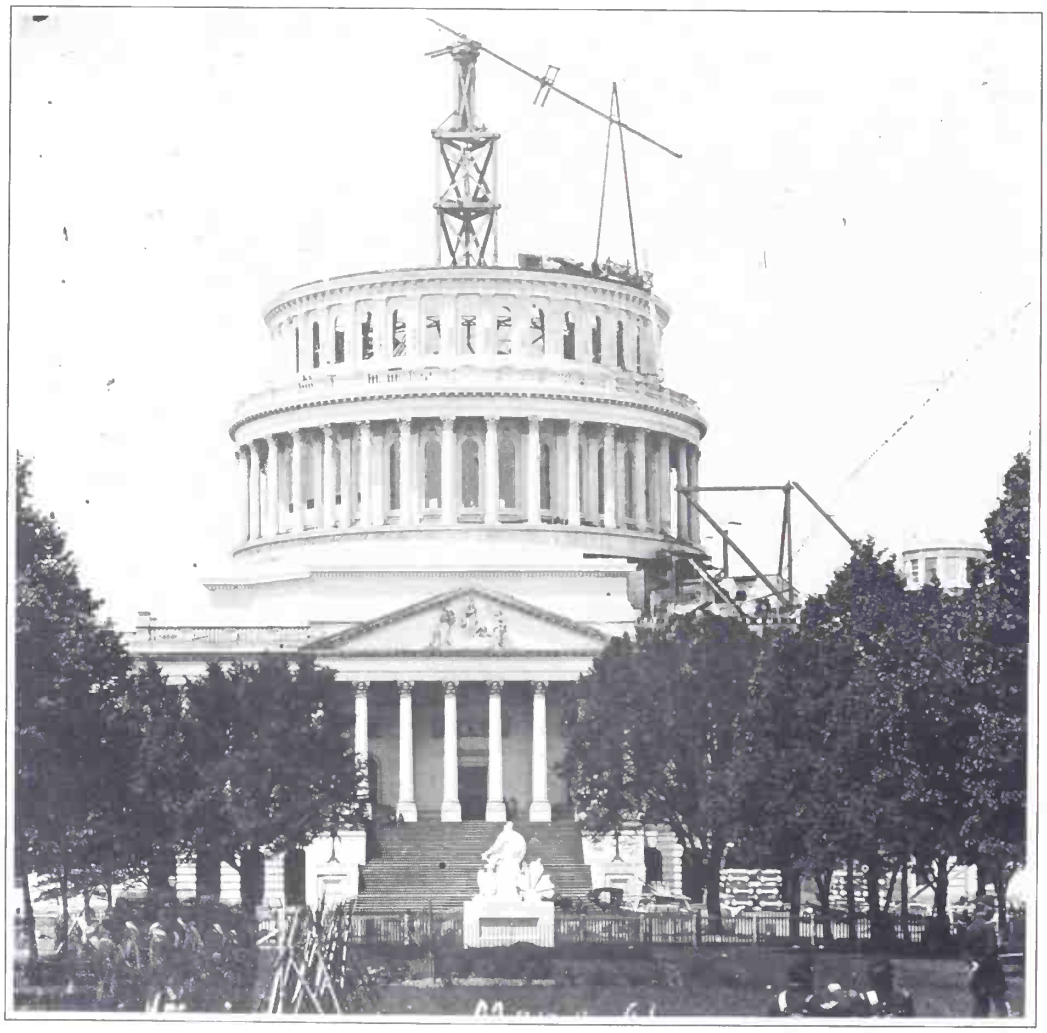
Dome Construction, 1857.

Workmen are engaged in setting the paired brackets that would carry the columns of the peristyle, or circular portico, of the dome.

Dome construction
December 31, 1859.

The columns of the circular portico, or peristyle, were cast in Baltimore for three and two-fifths cents per pound. Before the iron skirt was installed below the columns, they appeared to float above their foundations.

Dome Construction, May 9, 1861.
Despite the onslaught of civil war, iron contractors continued construction of the dome. Union soldiers may be seen in the foreground.



Unlike the models, however, the Capitol dome was to be a massive addition to an existing structure made possible by the relatively new, yet well developed, state of cast iron technology. Strong yet lightweight, cast iron was the only available material that would permit such a dome to be added without completely rebuilding the Bulfinch Rotunda. The old foundations and walls were tested and found to be strong enough to carry the additional weight without reinforcement. During construction a temporary wooden roof protected the Rotunda. Steam-powered derricks, positioned on a huge scaffold standing on the Rotunda floor, hoisted the iron into place.

Construction of the great cast iron dome began in 1856 with the removal of the original wooden dome. Along the top of the Rotunda walls over five million pounds of new masonry was installed, reinforced with strong iron bands and knitted to the existing structure built a generation earlier. Upon this new masonry base,

Plaster model of the statue of Freedom
Thomas Crawford, 1857
National Archives.

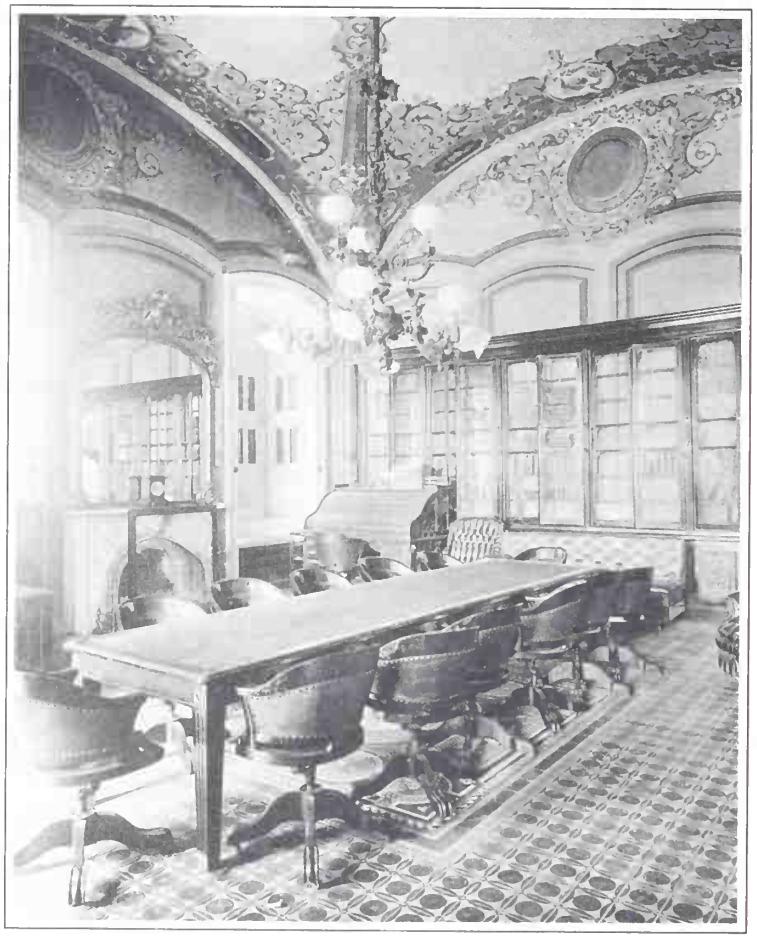
Shown here on display in the abandoned Hall of the House, the model of Freedom *by Thomas Crawford (1814–1857) was later cast in bronze by the Washington sculptor Clark Mills (1815–1881). The statue stands 19'–6" and represents armed Freedom triumphant in war and peace. The helmet is composed of an eagle's head and feathers.*

nearly nine million pounds of ironwork would be placed. The iron was brought to the Capitol by train from foundries in Virginia, Maryland, New Jersey and New York.

In 1859 the model of the statue of *Freedom* that was to crown the dome was received from the studio of Thomas Crawford, an American sculptor working in Rome. The extraordinary size of the statue (19'–6" tall) prompted Walter to modify his original design of the dome in order to accommodate a larger statue. The statue was cast by Clark Mills at his foundry a few miles from the Capitol. On December 2, 1863, the fifth and final section of the bronze statue of *Freedom* was mounted on top of the dome amidst a great celebration and military salutes. Upon completion, the Capitol dome became a striking testimony to the genius and the ingenuity of its designer. It also became an instant and enduring American icon.

Senate Judiciary Committee Room (present day S–126), ca. 1900.

As seen in this view, much of the furnishings of the Capitol were not, at the turn of this century, quite up to their surroundings. Shown hanging from the ceiling is a gas burning chandelier made by the Philadelphia firm of Cornelius and Baker. The fixture has been supplemented by electric lamps, which would soon replace gas lighting entirely.

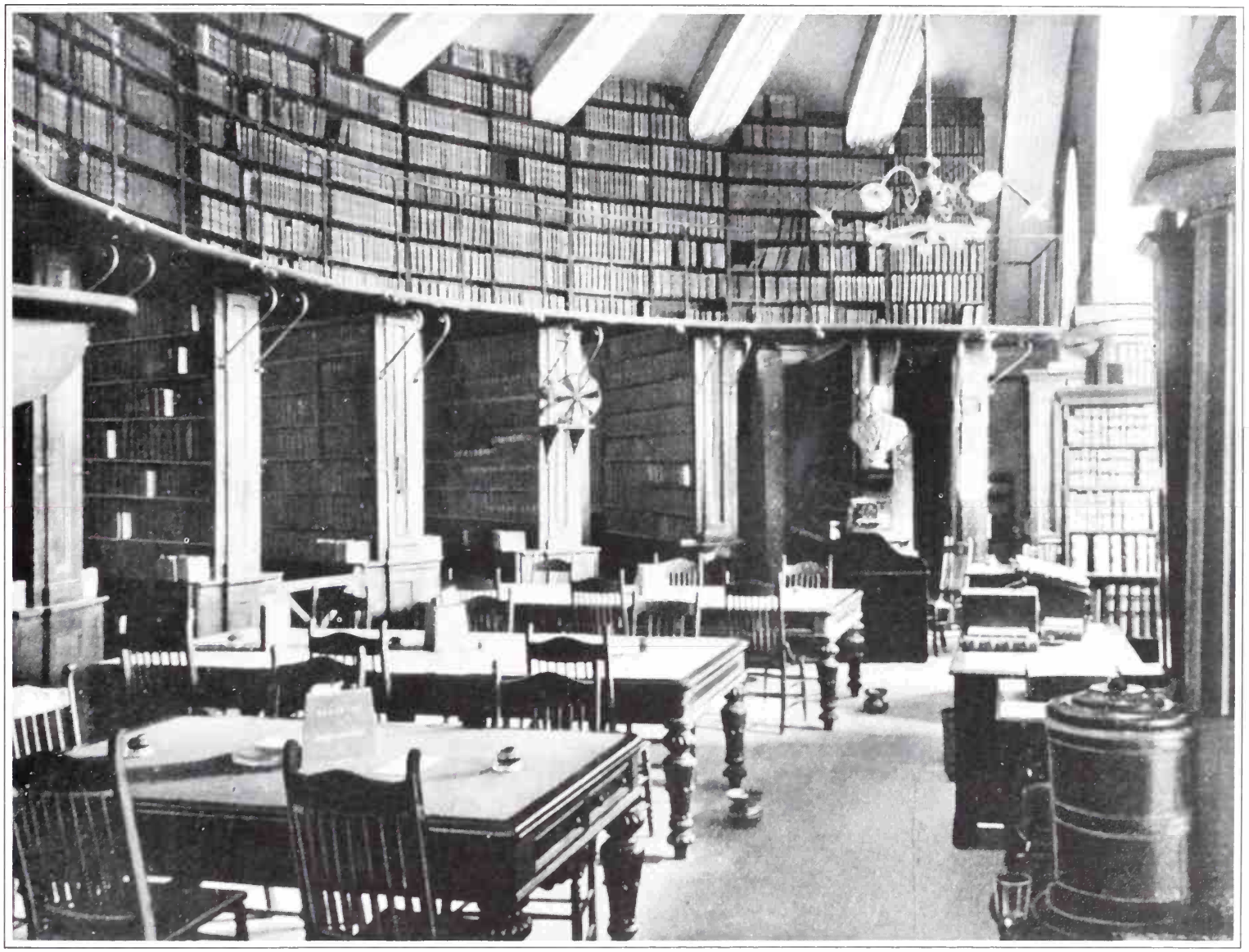


Supreme Court Chamber, ca. 1900.

From 1860 until 1935, the Supreme Court met in the former Senate Chamber.

Walter Retires

In a minor dispute over construction contracts, Walter resigned his position at the Capitol on May 26, 1865. After fourteen years in Washington and nearly exhausted, he returned to his native Philadelphia where he resumed a private practice. Walter's amiable assistant, Edward Clark, was appointed to succeed him. Clark completed the work on the Capitol extensions in 1868. A year earlier the old Capitol and the grounds, as well as the extensions, were placed under the control of the architect, thus removing the authority of the Commissioner of Public Buildings (whose office was abolished in 1867).



Law Library, ca. 1900.

While the Supreme Court was meeting in the old Senate Chamber, its original room on the first floor was fitted up as a law library. This room has been restored as it appeared during the mid-nineteenth century when the court met there.

Frederick Law Olmsted

Even before the extensions to the Capitol were completed, it was abundantly clear that the grounds would have to be expanded to provide a suitable setting for the vastly enlarged building. In 1873 "A" Streets North and South were closed and annexed to the Capitol grounds along with the squares that bordered them. The old iron fence and the sandstone piers and gatehouses, designed by Bulfinch in the 1820s, were removed and the grounds made ready for improvement. For this important work Congress turned to Frederick Law Olmsted, unquestionably the greatest landscape architect of the day. Shortly after his appointment in 1874, Olmsted produced a general plan for landscape improvements that called for broad open lawns, tree-shaded walks, low stone walls and a picturesque brick retreat called "The Grotto." The Olmsted design sought to surround the Capitol by an open park that would welcome visitors and invite them to linger.

A major part of Olmsted's plan was to build a great marble terrace along the north, south and west elevations of the Capitol to replace the existing stepped earthen berms, which he regarded as too weak and insignificant to visually uphold the massive Capitol. After some Congressional hesitation, work began on the Olmsted terrace in 1886 and was finished five years later. While the terrace added over one hundred rooms to the Capitol, its purpose as a grand pedestal for the Capitol was primary.

Modernization

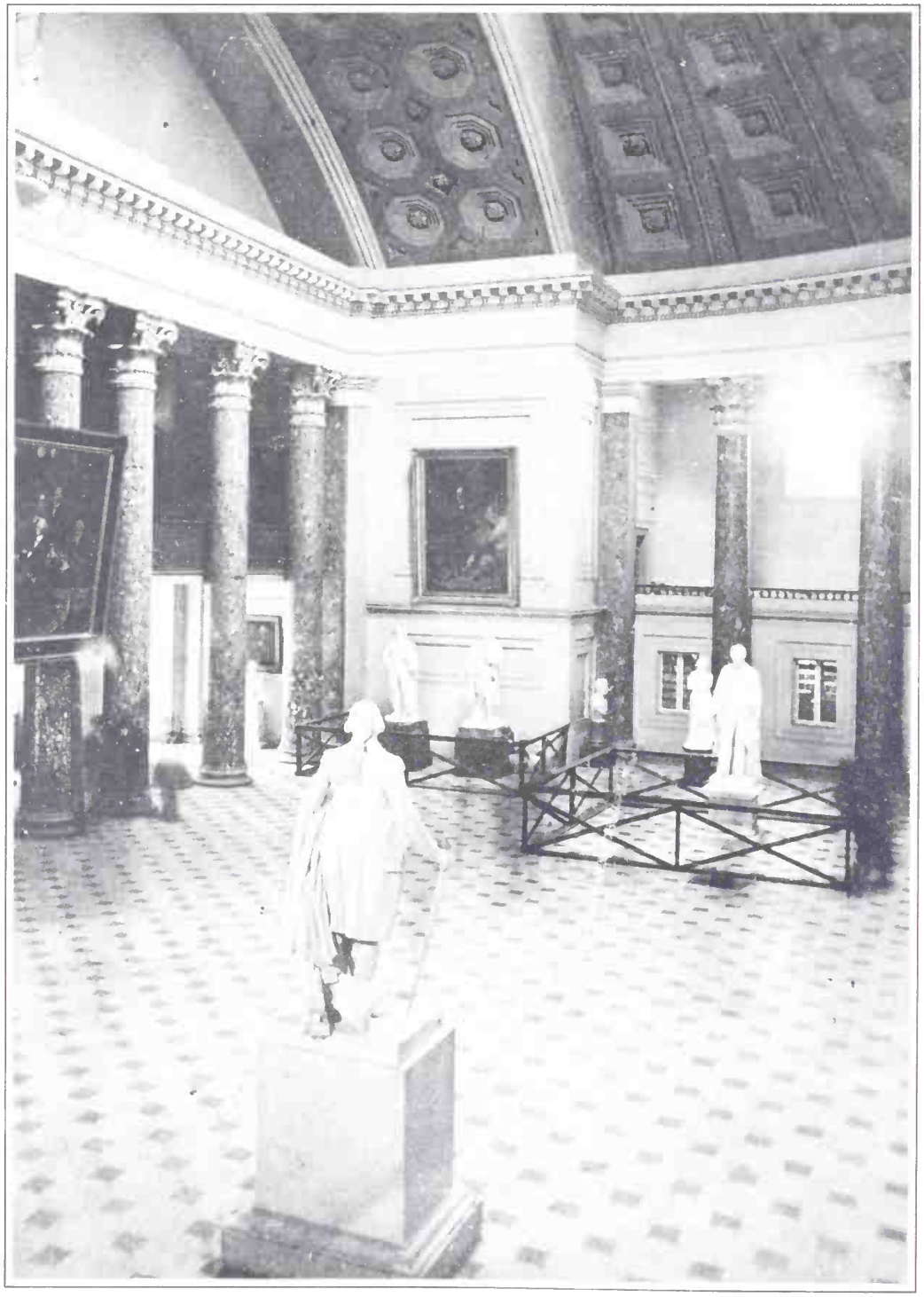
In his years as Architect of the Capitol (1865–1902), Edward Clark introduced many modern improvements to the Capitol. While these improvements seem primitive by today's standards, they helped the Capitol keep pace with the latest technological developments. In 1866 electricity was used to ignite the gas jets that in turn lit the dome. Steam heat gradually replaced the crude gravity hot-air furnaces in the cellar used to warm the old Capitol. The first elevator, which ran on a giant screw, was installed in 1874. It was so noisy, however, that a cable-hung cab was quickly substituted. Electric lighting began to replace gas in the 1880s. That task was still incomplete by November 6, 1898, when the Capitol was rocked by a gas explosion that originated in the basement of the original North Wing. This accident was brought under control before the whole wing was destroyed and served to point up the necessity of fireproofing the roofs of the old North and South Wings. Accordingly, the old wooden ceiling in Statuary Hall and the plaster ceiling in the Supreme Court were replaced with ones of cast steel. The roofs of the two wings were rebuilt with fireproof materials, and the pitch was lowered to improve appearances. This work was begun in the last days of Edward Clark's term as Architect of the Capitol and was completed in 1902 by his successor, Elliott Woods.

Woods and Lynn

During the administrations of Elliott Woods (1902–1923) and his successor David Lynn (1923–1954), the Architects of the Capitol were primarily concerned with meeting the burgeoning space requirements of the House of Representatives, the Senate, the Supreme Court, the Library of Congress and the Botanic Garden. In this half-century period, seven major buildings were constructed, several additions made to them, the grounds enlarged and underground parking provided. While the facilities on Capitol Hill were being greatly expanded and improved, this period is a relatively quiet one in the architectural history of the Capitol. Woods hired a small army of decorators to rid parts of the interior of its shabby and gloomy appearance. He also had the interior stonework cleaned of all paint and replaced a great deal of plaster with imitation stone for the sake of appearance and ease of maintenance.

View of the Capitol from the northwest, ca. 1901.

To provide the Capitol with a strong visual base, the landscape architect Frederick Law Olmsted (1822–1903) designed a great marble terrace shown here shortly after completion. It corrected the illusion that the Capitol was about to slip off the edge of Jenkins' Hill.



Statuary Hall, ca. 1900.

This view was taken shortly before the ceiling was removed and replaced by one of fireproof cast steel. The original was wood painted to appear richly coffered and decorated.

Beginning in 1949 the House and Senate Chambers were totally remodeled. The deteriorated iron and glass ceilings, which had threatened to collapse due to corrosion caused by leakage, were removed, and the chambers were redesigned according to the prevailing taste of the day.

East Front Extension

Between 1958 and 1962 a marble-clad addition was placed on the East Front of the Capitol between Thomas U. Walter's wings. This extension to the Capitol, first proposed by Walter in 1864, was considered necessary to correct the illusion that the great iron dome was teetering over the void of Bulfinch's East Portico and was, therefore, inadequately supported. By moving the East Portico out some thirty-three feet, this illusion was corrected and the Capitol gained another ninety rooms. At the same time the crumbling Aquia Creek sandstone of the original walls became an interior wall protected from the elements, and the old vaulting was buttressed by the new addition. This project, which also included repair work to the dome, was carried out under the direction of George Stewart, who was appointed Architect of the Capitol in 1954.

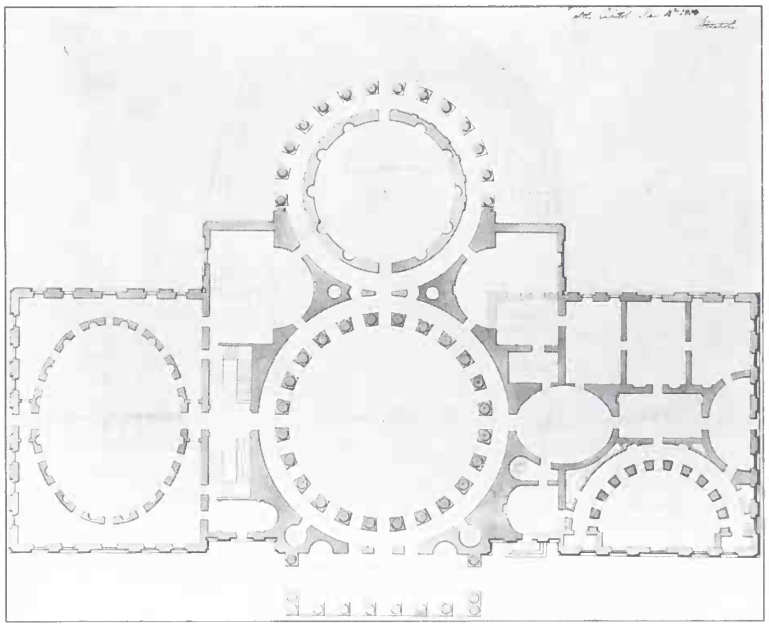
Recent Restorations

Since the 1970s work on the Capitol has emphasized a higher standard of maintenance and technology as well as a renewed appreciation of the building's architectural history. These new concerns have been fostered by George M. White, FAIA, who was appointed Architect of the Capitol in 1971.

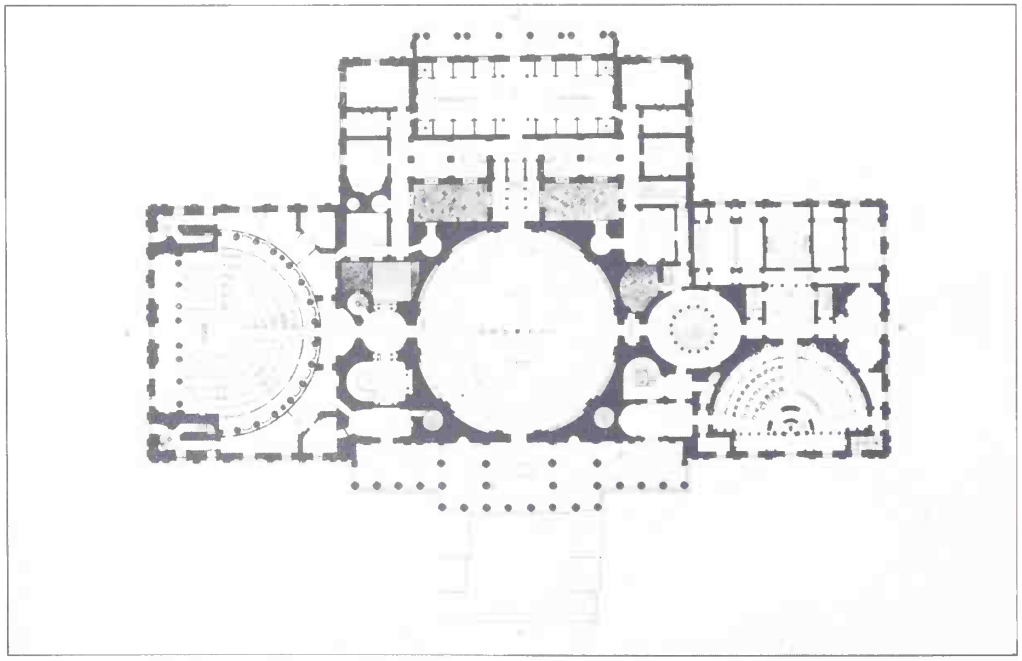
In 1973 electronic voting was introduced in the chamber of the House of Representatives in order to expedite what had been a cumbersome and time consuming procedure. Regular nationwide television coverage of the House debates was introduced in 1979 followed by the Senate in 1986. Electronic surveillance systems, improved climate control and new computer and communications capabilities are among the modern technologies that allow the Capitol to function efficiently and safely.

In anticipation of the nation's bicentennial in 1976, the Old Senate Chamber and the original Supreme Court Chamber were restored to their mid-nineteenth-century appearance. In 1935 the Supreme Court moved into its new marble building facing the Capitol and vacated its quarters in the North Wing. The room in which the Court had met from 1860—the original Senate Chamber—was stripped of its decoration and used as an all purpose meeting room. The Law Library on the first floor was accorded even less respect. It had been divided into three rooms and its splendid "umbrella" vault hidden by a dropped ceiling. These unfortunate alterations were swept away during the restorations and the rooms returned to a dignified and authentic appearance. The Old House of Representatives Chamber, since 1864 National Statuary Hall, was restored above the level of its marble floor. This work included draping the colonnade, reproducing the historic lighting fixtures and mantles and repainting.

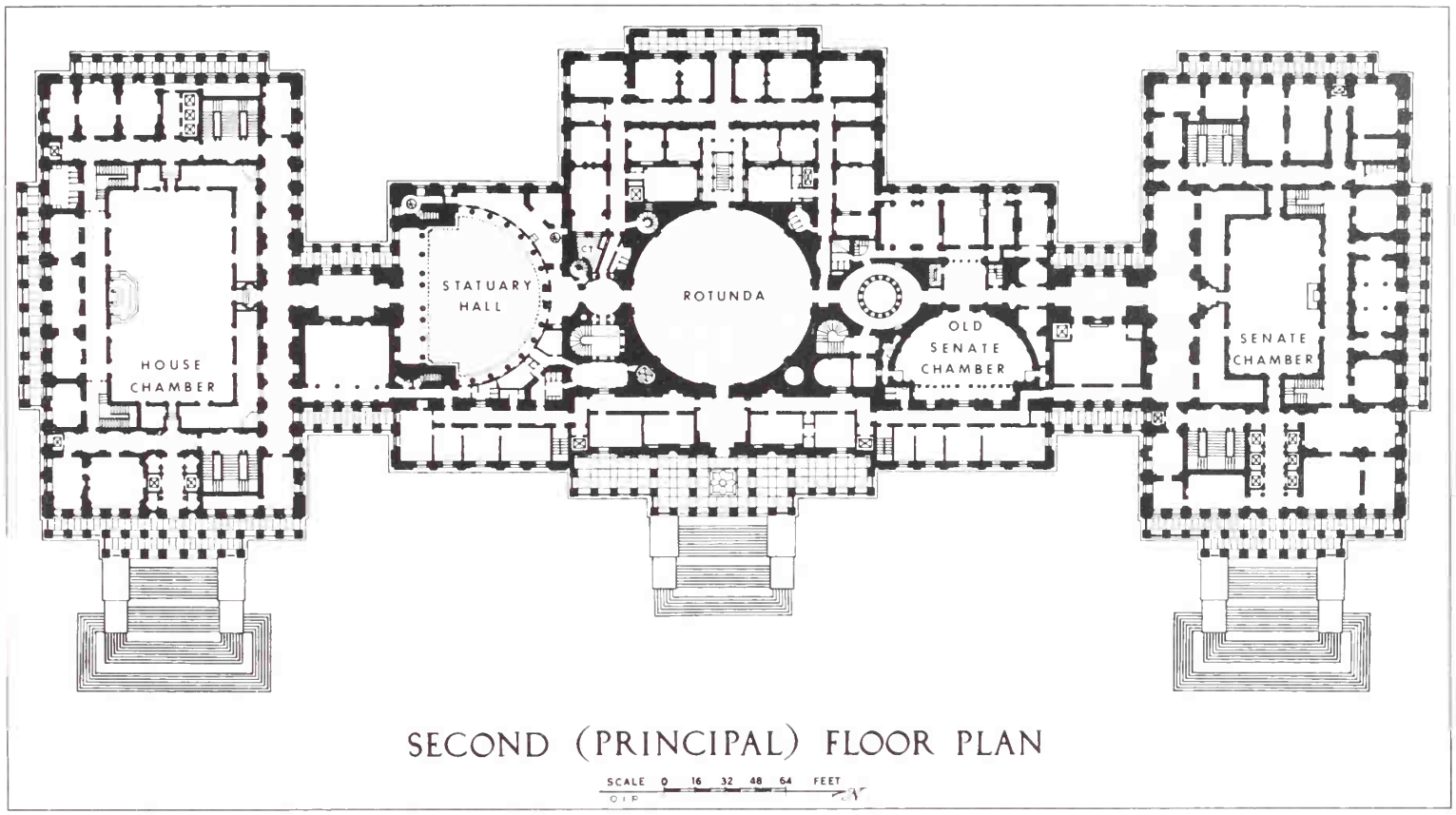
The most ambitious restoration project in the history of the Capitol was begun in 1983 and completed in 1987. It involved the restoration of the sandstone walls of the West Central Front, the only elevation of the Old Capitol that had not been covered over by marble additions. To return the deteriorated West Front to a pristine condition, approximately forty percent of the Aquia Creek sandstone was removed and replaced with Indiana limestone. The stone replacement was preceded by a careful analysis of each stone's structural stability. Many layers of paint, which tended to conceal defects, were removed. Over 1,000 2½" holes, many as long as 37' were drilled through the walls and stainless steel rods set in concrete grout were installed to reinforce the vaulted structure and foundation. All windows were replaced for the sake of



Plan of the Capitol
Dr. William Thornton, ca. 1797
Library of Congress.



Plan of the Capitol
Alexander Jackson Davis, ca. 1834
Library of Congress.



Plan of the Capitol, 1974.

A comparison of these plans points to the evolutionary nature of the Capitol's history. Of the original plan by Thornton, only a few features of the north wing and the idea of a central rotunda survived intact. His circular conference room at the top of the first plan was discarded early in favor of a rectangular west central building housing the Library of Congress. The second plan shows the Capitol as first completed in 1826 and as it stood until 1851. Except for the Library, much of this plan still stands. The third plan shows the Capitol as it is today, expanded by north and south wings and an east front extension.

energy efficiency. After a consolidant was applied to strengthen the stone, the West Front was repainted.

Upon completion of the West Central Front Restoration, the Capitol has achieved a structural and architectural culmination as intriguing in its construction history as it is majestic in its result.

Aerial view of the Capitol looking northeast, 1980.

Office buildings for the Senate and House of Representatives, buildings for the Library of Congress, Supreme Court and Botanic Garden surround the Capitol today in a campus-like setting.

Our first object the next morning was to get a sight of the capitol, and our impatience sent us forth before breakfast. The mists of morning still hung around this magnificent building when first it broke upon our view, and I am not sure that the effect produced was not the greater for this circumstance. At all events, we were struck with admiration and surprise. None of us, I believe, expected to see so imposing a structure on that side the Atlantic. I am ill at describing buildings, but the beauty and majesty of the American capitol might defy an abler pen than mine to do it justice. It stands so finely too, high, and alone.

The magnificent western façade is approached from the city by terraces and steps of bolder proportions than I ever before saw. The elegant eastern front, to which many persons give the preference, is on a level with a newly-planted but exceedingly handsome enclosure, which, in a few years, will offer the shade of all the most splendid trees which flourish in the Union, to cool the brows and refresh the spirits of the members. The view from the capitol commands the city and many miles around, and it is itself an object of imposing beauty to the whole country adjoining.

Frances Trollop, *The Domestic Manners of the Americans*, 1832.

We have built no national temples but the Capitol; we consult no common oracle but the Constitution.

Representative Rufus Choate, 1833.

We The People